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# THE NORTH DAKOTA FARMER

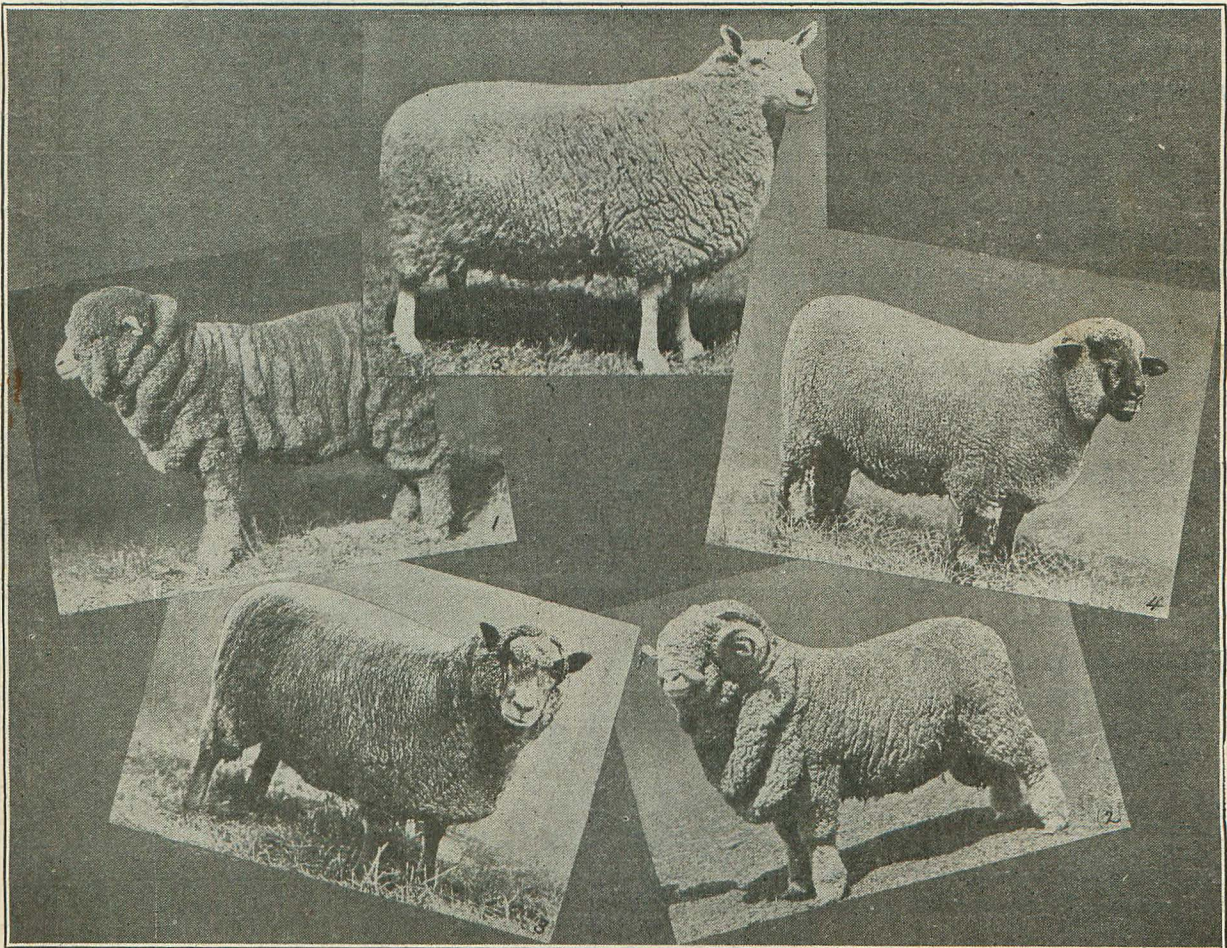


"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARM"

Vol. 16, No. 11

Lisbon, North Dakota, May 15, 1915

50 Cents A Year



## A STUDY IN SHEEP

No. 1, Class A Merino Ewe; No. 2, Rambouillet Ram; No. 3, Southdown Ewe; No. 4, Hampshire Ram; No. 5, Cheviot Ewe,

978.4

N814

Graham



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*Our \$50,000<sup>00</sup> Cash Bond*  
**30 DAY FREE TRIAL OFFER**

## OUR GUARANTEE

**SATISFACTION ABSOLUTELY GUARANTEED OR YOUR MONEY BACK**

We guarantee you that if for any reason whatever you would rather have the money than the engine, and notify us of your desire to return same within thirty days after it arrives at your depot we will immediately advise you where to ship the engine and, upon your complying with our request in this matter, every cent you may have paid us for the engine will be cheerfully repaid to you, without question and without delay, immediately upon receipt of engine.

Two Hundred Miles Beyond  
the Arctic Circle

Detroit Engine Works,  
Detroit, Mich., U. S. A.

Gentlemen—We note you wish our report on the five engines we recently purchased from you. We are glad to inform you that we have only good things to say about them. One of them is in daily use at Gibstad, Norway, 200 miles north of the Arctic Circle.

AXEL H. HANSENS Co.,  
Arendel, Norway.

"Most up-to-date engine in these parts. Develops more power than any two-horse power engine to my knowledge."

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Thousands of farm homes use "Detroit Engines" for sawing, threshing, spraying, pumping, churning, grinding feed, running a dynamo to light the house or barns, etc., etc.

### The 2 cycle "Detroit" has only 3 movable parts

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### The Detroit operates perfectly on kerosene

- 2 or gasoline, alcohol, naphtha or distillate, but most "Detroit" owners use **Kerosene**, because it's cheap, easy to get—it doesn't evaporate—gives more power, and it **don't explode**.

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- 3 The Detroit 2-Cycle engine does the same work which requires 4 strokes in the complicated 4-cycle engine. The "Detroit" creates a power impulse every 2 strokes, other engines require 4 strokes.

### You don't crank the Detroit

- 4 It starts instantly, without cranking. It can be reversed while running, also the speed may be changed while running. The Detroit Fuel Injector insures perfect combustion.

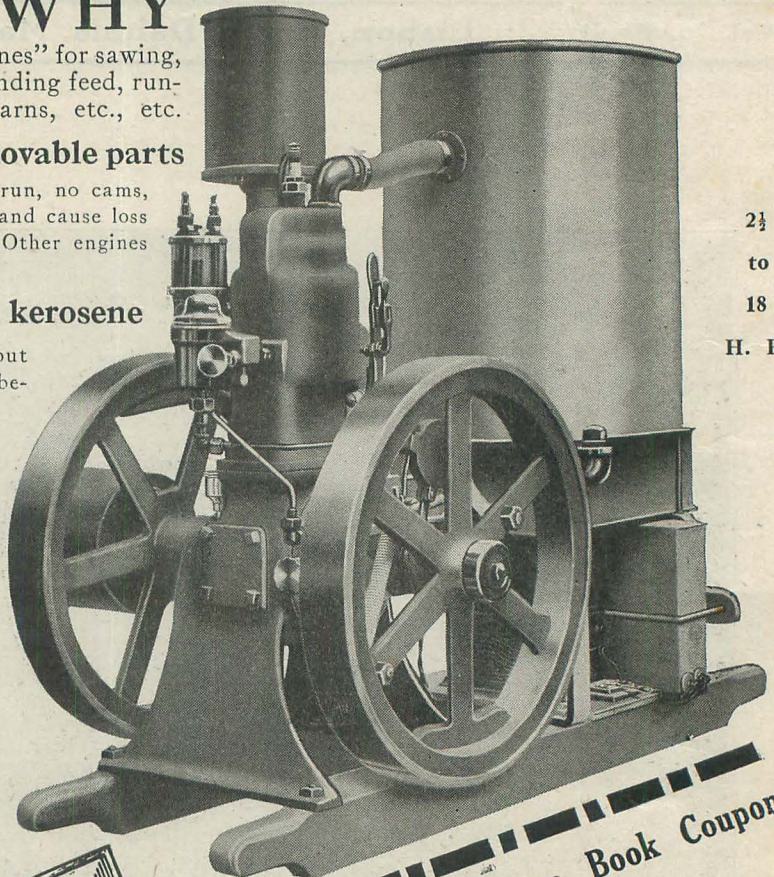
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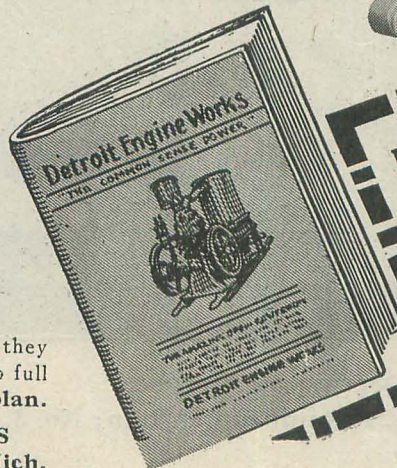


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# THE NORTH DAKOTA FARMER

Vol. 16, No. 11

LISBON N. D., MAY 15, 1915

50 Cents a Year

## Experiment Station Hints

### A \$1500 Contest for Boys



\$1500 contest for boys has been launched in Ward County, North Dakota thru the efforts of the County Field Agent, W. A. Peck. The name of the contest is "Ward County Boys' Contest." It is open to Ward County boys 14 to 20 years of age. The conditions are that each boy farm a 17-acre tract for three years, growing 5 acres of corn, 5 of wheat and 5 of some other grain crop, these to be rotated, and 2 acres of alfalfa. The boys must keep a record of all expenses including labor. The prizes, which are as follows, will be awarded on the basis of the largest net income at the end of the third crop season. 1st prize, \$250; 2nd, \$200; 3rd, \$150; 4th, \$100; 5th, \$75; 6th to 15th (10), each \$50; 16th to 24th (9), each \$25. Sweepstakes, \$100 silver cup to be awarded each year to the boy securing the largest net income. At the end of the third year the boy having the largest average net income becomes the permanent owner of the cup.

### Wild Oats

An experiment carried on at the North Dakota Experiment Station on depths wild oats will come up from, brought out the following results:

Wild oats were sown October 17 at depths of 1, 2, 3, 5, 7 and 10 inches. By November 25 a few plants came up from one, two and three-inch depths. By the next April 28 a few of the wild oats from the one, two and three-inch plantings were up. On May 12, 43 plants from the one-inch depth were pulled, 31 from the two-inch and 40 from the three-inch. It was June 6th before the wild oats from the five-inch depth came up and then but six. By June 13 of the next year 8 plants had come up from the two-inch depth. At the end of five years the seed were all dug up and all were dead.

Summing up—equal quantities of seed were sown at the different depths. Of the one-inch deep, 66 grew. Of the two-inch 31 grew. Of the three-inch 53 and of the five-inch but 8.

The rest of the seed was all rotted at the end of five years.

### Asparagus

Asparagus does well in North Dakota. It should be started in the spring on land that has been thoroly enriched by plowing under fifty loads of well rotted stable manure per acre to a depth of 10 or 12 inches. Set the plants in furrows a foot deep and four feet apart. Use one-year old plants and set them so that the crowns will be four or five inches below the surface of the soil. The secret of successful asparagus culture is to keep the land rich. This can be done by successive top dressings of stable manure.

### Mustard Seed Good Stayers

Mustard seed can be buried in the soil for five years and still retain a good deal of its germinating power.

Equal quantities of mustard seed were sown at depths of 1, 2, 3, 5, 7 and 10 inches October 17. The following May 5th, 730 of the one-inch seed were up, 635 of the two-inch and 290 of the three-inch. By June 5th, 20 more were up from the one-inch depth and 19 from the two-inch planting. At the end of five years the remaining seed were dug up. Of the three-inch planting one-fourth grew; one-sixth of the five-inch seed; one-fourth of the seven-inch and nearly one-half of the ten-inch seed germinated. From this it is plain that the best way to get rid of mustard seed is to get them within an inch or two of the surface so that they will germinate and then kill the plants while small.

### Effect of Timothy on Soil

Timothy has a good effect on the soil. We find the four crops of wheat following two crops of timothy were increased twenty-two and four-fifths bushels above the yield from four crops of wheat following wheat; so that nearly as much wheat was raised in the four years following the two years of timothy as in the six years of all wheat.

### Load Even

In loading a wagon place the load evenly over the front and hind wheels. If any difference is made it should be on the hind wheels. They are larger and hence do not sink in as deep as the smaller front wheels. The fact that the load is farther from the team does not increase the draft on the wagon. When the team is hitched to something dragging on the ground then the nearer the team is to the load the lighter the pull. This is due to the fact that the nearer the team is the more the pull will be upward, thus helping to reduce the friction between the load and the ground.

### Value of Millet

Millet leaves the soil in shape to produce a better crop of wheat. It has been found that the three crops of wheat following millet produced sixteen and one-fourth bushels more wheat than the three crops of wheat following wheat. When the millet was manured the next three crops of wheat was increased twenty-six and one-fourth bushels or ten bushels of wheat for the manure. The millet is a good cleaning crop.

### Peas at \$16 per Acre

During a trial in two consecutive years, pigs that foraged off a field of peas during the months of September and October each year required in addition, two pounds of barley per 100 pounds live weight of pigs per day to keep them gaining as rapidly as pigs of the same age and size being fed in a dry lot and receiving four pounds of barley per day per 100 pounds live weight of pigs. This shows that the peas made possible a saving of one-half the amount of barley usually required by pigs being fed in dry lots. The return for the peas was \$16 per acre.

### Wide Tires

On the common earth roads and in the field horses can on an average pull 50 per cent more load on a wide-tired wagon than on one with narrow tires. In other words two horses can pull as much load on the wide tires as



three can on a narrow tired wagon. The wide tires help pack the road, the narrow tires make ruts.

#### Hogging Down Corn

A group of sixteen pigs pasturing on a field of two and one-half acres, Minnesota 13 corn from September 16 to October 21, a period of five weeks, made an average gain of 57 pounds each or a gain of 1.61 pounds each per day. The weather conditions during that period were not exceptionally favorable to hogging down corn as there were at least ten or twelve wet, cold days. On October 13, two of the pigs showed a little stiffness and were removed from the field. The total gain of the lot was 818 pounds, which at 7 cents per pound would be worth \$57.26. In addition to the corn this group of

pigs received 178.5 pounds shorts, 108.5 pounds tankage and 210 pounds barley. This feed would be worth \$6.25 leaving \$51.01 as the value received for the corn by hogging down. This gives a value of \$20.40 per acre for the corn without the expense of harvesting it, even tho it was a very poor crop.

#### Clover with Wheat

An experiment was made of sowing two pounds of clover seeds with the wheat and plowing it under in the fall with the stubble. This was tried for eight years. The increase in yield of wheat averaged two bushels per acre a year, enough to pay for the clover seed several times. This is also a good way to get the land in shape for growing clover.

## The New Education

By John H. Worst, Pres. N. D. A. C.

Education having a direct bearing upon industrial pursuits is of recent origin. For centuries such education as was available was intended to prepare the youth for professional or business pursuits or for personal enjoyment. Agriculture and other industrial pursuits were not considered as proper subjects for educational uplift, but were relegated to those who possessed the muscle and physical endurance to overcome Nature's resistance, with little or no thought of applying science and education to the ordinary affairs of life.

Within recent years, however, the larger demand for food and clothing has made it necessary to cultivate the soil with greater skill and to enrich common toil not only with labor-saving machinery, but also with training in schools especially equipped for that purpose. The children of the rural districts also are demanding education in terms of country life—education that will enable them to use their brains as well as their hands and thus be able to accomplish their tasks without needless drudgery.

In fact soulless drudgery is being looked upon more and more as a crime against both body and mind. This for the reason that all useful labor may be performed with pleasure, provided the proper educational training is brought to bear upon the various processes involved in the productive industries. This applies as forcibly to the duties of the wife and mother in the home as to men employed in the factories or on the farm.

Modern inventions make it possible to perform several times as much labor

as could formerly be performed and practically all of it without the back-breaking toil that the older members of even this generation had to endure, in field and factory. In fact farming is coming to be considered a profession and as such entitles the farmer to rank intellectually and professionally with men of other professions. As a profession farming has a real scientific basis to work from. Chemistry, biology, and physics apply either singly or in combination wherever man and Nature co-operate to produce the things needful for sustaining life.

Then there is the consoling thought: the product of the fields, the joint efforts of the husbandman and the Creator, is for humanity as well as for the farmer's profit. For the farmer in very truth stands between humanity and starvation, which makes his profession the most useful, the most sacred that young men can aspire to.

Little wonder then that this high and holy calling known as agriculture should be rescued from the ignominy placed upon it when given over to slaves two thousand years ago and which is yet the inheritance of peasantry in most European countries.

But the hands will not turn back on the dial of progress. North Dakota offers a free and fair field for the most advanced agriculture—an agriculture as thoroughly intellectualized as law or medicine and eminently more interesting. To this useful vocation a young man may devote his energies with full assurance of success and that without losing social caste, as in the years gone by. In this interesting profession he may find as lucrative a market

for his brains as any city calling offers, but with far greater opportunity for independence and assurance of robust health.

North Dakota will expand or shrivel in proportion as she throws wide open the door of agricultural opportunity for the young people of the state by means of public education in terms of rural life, or by closing it save to a limited number who may press thru it.

The present generation of farmers cannot be expected to go to school. The schools are for the farmers to be. However, by means of college extension activities and the county agency plan being worked out in accordance with the provisions of the Smith-Lever Act, much valuable information will be carried to the very doors of such farmers as will accept it.

For those unable to attend school the school will be taken to them; and since the federal government takes so much interest in the farmer's welfare the state can scarcely do less. It remains for the Legislative Assembly to act.

#### BIRDS IN RELATION TO AGRICULTURE

##### The Catbird

The catbird, like the thrasher, is a lover of swamps, and delights to make its home in a tangle of wild grapevines, greenbriers, and shrubs, where it is safe from attack and can find its favorite food in abundance.

The stomachs of 213 catbirds were examined and found to contain 44 per cent of animal (insect) and 56 per cent of vegetable food. Ants, beetles, caterpillars, and grasshoppers constitute three-fourths of the animal food, the remainder being made up of bugs, miscellaneous insects, and spiders. One-third of the vegetable food consists of cultivated fruits, or those which may be cultivated, such as strawberries, raspberries, and blackberries; but while we debit the bird with the whole of this, it is probable—and in the eastern and well-wooded part of the country almost certain—that a large part is obtained from wild vines. The rest of the vegetable matter is mostly wild fruit, such as cherries, dogwood, sour gum, elder berries, green brier, spice berries, black alder, sumac, and poison ivy. Altho the catbird sometimes does considerable harm by destroying small fruit, the bird can not be considered injurious. On the contrary, in most parts of the country it does far more good than harm.

##### The Brown Thrasher

The brown thrasher breeds thruout the United States east of the Great Plains, and winters in the South At-



lantic and Gulf States. It occasionally visits the garden or orchard, but nests in swamps or in groves standing upon low ground.

The food of the brown thrasher consists of both fruit and insects. An examination of 121 stomachs showed 36 per cent of vegetable and 64 of animal food, practically all insects, mostly taken in spring before fruit was ripe. Half the insects were beetles, and the remainder chiefly grasshoppers, caterpillars, bugs, and spiders. A few predaceous beetles were eaten, but on the whole the work of the species as an insect destroyer may be considered beneficial.

Taken all in all, the brown thrasher is a useful bird, and probably does as good work in its secluded retreats as it would about the garden, for the swamps and groves are no doubt the breeding grounds of many insects that migrate thence to attack the crops of the farmer.

#### The Robin

The robin is found thruout the United States east of the Great Plains, and is represented farther west by a slightly different subspecies. The food habits of the robin have sometimes caused apprehension to the fruit grower, for it is fond of cherries and other small fruits, particularly the earlier varieties. For this reason many complaints have been lodged against the bird, and some persons have even gone so far as to condemn it. The robin is, however, far too valuable to be exterminated, and choice fruit can be readily protected from its depredations.

An examination of 500 stomachs shows that over 42 per cent of its food is animal matter, principally insects, while the remainder is made up largely of small fruits or berries. Over 19 per cent consists of beetles, about one-third of which are useful ground beetles, taken mostly in spring and fall, when other insects are scarce. Grasshoppers make up about one-tenth of the whole food, but in August comprise over 30 per cent. Caterpillars form about 6 per cent, while the rest of the animal food, about 7 per cent, is made up of various insects, with a few spiders, snails, and angleworms. All the grasshoppers, caterpillars, bugs and a large portion of beetles, are injurious, and it is safe to say that noxious insects comprise more than one-third of the robin's food.

In view of the fact that the Robin takes ten times as much wild as cultivated fruit, it seems unwise to destroy the birds to save so little. Nor is this necessary, for by a little care both birds and fruit may be preserved. Where much fruit is grown,

it is no great loss to give up one tree to the birds, and in some cases the crop can be protected by scarecrows.

#### The Redwinged Blackbird

The redwinged or swamp blackbird is found all over the United States and the region immediately to the north. While common in most of its range, its distribution is more or less local, mainly on account of its partiality for swamps. Its nest is built near standing water, in tall grass, rushes, or bushes. Owing to this peculiarity the bird may be absent from large tracts of country which afford no swamps or marshes suitable for nesting. It usually breeds in large colonies, tho single families, consisting of a male with several wives, may be found sometimes in a small slough, where each of the females builds her nest and rears her own little broods, while her liege lord displays his brilliant colors and struts in the sunshine.

Many complaints have been made against the redwing, and several states have placed at times a bounty upon its head. It is said to cause great damage to grain in the West, especially in the upper Mississippi Valley; and the rice growers of the South say that it eats rice. No complaints come from the northeastern part of the country, where the bird is much less abundant than in the West and South.

The examination of 1,083 stomachs showed that vegetable matter forms 74 per cent of the food, while the animal matter, mainly insects, forms but 26 per cent. A little more than 10 per cent consists of beetles, mostly harmful species. The most important item of the bird's food, however, is weed seed, which forms practically the whole food in winter and about 57 per cent of the fare of the whole year. The principal weed seeds eaten are those of ragweed barn grass, and smartweed. That these seeds are preferred is shown by the fact that the birds begin to eat them in August, when grain is still readily accessible, and continue feeding on them even after insects become plentiful in April. The redwing eats very little fruit and does practically no harm in the garden or orchard. Nearly seven-eighths of its food is made up of weed seeds or of insects injurious to agriculture, indicating unmistakably that the bird should be protected, except, perhaps, in a few places where it is over abundant.

#### The Meadowlark

The meadowlark is a common and well-known bird occurring from the Atlantic Coast to the Great Plains, where it gives way to a closely related

subspecies, which extends thence westward to the Pacific.

In the 285 stomachs examined, animal food (practically all insects) constituted 73 per cent of the contents, and vegetable matter 27 per cent. As would naturally be supposed, the insects were ground species, such as beetles, bugs, grasshoppers, and caterpillars, together with a few flies, wasps, and spiders. A number of the stomachs were taken from birds killed when the ground was covered with snow, but even these contained a large percentage of insects, showing the bird's skill in finding proper food under adverse circumstances.

Briefly stated, more than half of the meadowlark's food consists of harmful insects; its vegetable food is composed either of noxious weeds or waste grain, and the remainder is made up of useful beetles or neutral insects and spiders. A strong point in the bird's favor is that, altho naturally an insect eater, it is able to subsist on vegetable food, and consequently is not forced to migrate in cold weather farther than is necessary to find ground free from snow.

#### The Crow Blackbird or Gackle

The crow blackbird in one or more of its subspecies is a familiar object in all the states east of the Rocky Mountains. Thruout the year it is resident as far north as southern Illinois, and in summer extends its range into the British provinces. In the Mississippi Valley it is one of the most abundant birds, preferring to nest in the artificial groves and windbreaks near farms instead of in the natural "timber" which it formerly used. It breeds also in parks and near buildings, often in considerable colonies. Farther east, in New England, it is only locally abundant, tho frequently seen in migration. After July it becomes very rare, or entirely disappears, owing to the fact that it collects in large flocks and retires to some quiet place where food is abundant and where it can remain undisturbed during the molting season; but in the latter days of August and thruout September it usually reappears in immense numbers before moving southward.

The crow blackbird is accused of many sins, such as stealing grain and fruit and robbing the nests of other birds; but the farmers do not undertake a war of extermination against it, and for the most part allow it to nest undisturbed about their premises. An examination of 2,346 stomachs shows that nearly one-third of its food consists of insects, of which the greater part are injurious.



### The Cedarbird

The cedar waxwing, or cherry bird, inhabits the whole of the United States, but is much less common in the West. Altho the great bulk of the species retires southward in winter, the bird is occasionally found in every state during the colder months, especially if wild berries are abundant. Its proverbial fondness for cherries has given it its popular name, and much complaint is made on account of the fruit it eats.

Altho the cherry bird is not a great insect destroyer, it does some good work in this way, since it probably rears its young mostly upon insect food. On the other hand, it does not devour nearly as much cultivated fruit as has been asserted. Most, if not all, of the damage can doubtless be prevented by planting near garden or orchard such trees as the Russian mulberry, whose fruit attracts so many birds.

### ROTATIONS FOR WESTERN NORTH DAKOTA

The rotation practiced on the New Salem Demonstration Farm is as follows: corn followed by fife wheat, then oats followed by oats and peas, followed by macaroni wheat, and back to corn again. This has proved a very good rotation.

On the Demonstration Farm at Ross the following rotation is practiced: corn, followed by wheat, then timothy and clover or summer fallow, followed by wheat and then oats. One field is in alfalfa six years. Then the alfalfa will be put on one of the other fields and the alfalfa field take its place in the rotation.

### EVERLASTING CLOTHES POSTS

The trend of the times, in the construction of all out-door accessories for the home, is to make them durable. They will then give to the property the well-kept look which appeals to all when the question of value, neatness or tidiness is considered. Many a good housewife all too often finds that, due to a weak wobbly post, her clean linen has been blowing all over the backyard until its condition beggars description.

Concrete clothes posts are everlasting. They keep in better alignment than the lighter wood posts. They will not rot or burn down and they are rigid enough to sustain any number of lines.

The post should be about 11 feet long, 8 inches square at the top and 12 inches square at the base, and should be firmly embedded at least 3

feet in the ground. It should be reinforced with one-fourth inch round rods placed in each corner so that they will come one and one-half inches from the outside surface.

The form for the post may be made of 1 inch lumber cut so as to give the dimensions noted above, or if a smooth floor or walk is available, only the sides and ends of the box need be used, the floor or walk serving as the bottom of form.

The mixture used should be in the proportion of 1 part of cement, 2 parts of sand and 4 parts of rock or gravel not greater in size than one or one and one-half inches. Bank run gravel should not be used but should be screened, passing over three-eighths inch and one and one-half inch mesh sloping screens, the material which passes thru the three-eighths inch screen being called sand and thru the one and one-half inch screen and re-

### CROP REPORT, NORTH DAKOTA AND UNITED STATES Bureau of Crop Estimates, in Co-operation with Weather Bureau, United States Department of Agriculture

|                                                         | N. D.  | U. S.       |
|---------------------------------------------------------|--------|-------------|
| Winter Wheat:                                           |        |             |
| May 1, forecast of production, 1915, Bushels.....       |        | 693,000,000 |
| Final estimate of production, 1914, Bushels.....        |        | 684,990,000 |
| Rye:                                                    |        |             |
| Condition May 1, 1915, Per cent of normal.....          | 94     | 89.8        |
| Condition May 1, 8-year average, Per cent of normal.... | 88     | 90.6        |
| Meadows:                                                |        |             |
| Condition May 1, 1915.....                              | 89     | 89.8        |
| Condition May 1, 10-year average, Per cent of normal    | 83     | 88.6        |
| Pastures:                                               |        |             |
| Condition May 1, 1915, Per cent of normal.....          | 86     | 87.2        |
| Condition May 1, 10-year average, Per cent of normal .. | 82     | 86.4        |
| Spring Plowing:                                         |        |             |
| Per cent done May 1, 1915.....                          | 72     | 78.3        |
| Per cent done May 1, 10-year average.....               | 46     | 68.0        |
| Spring Planting:                                        |        |             |
| Per cent done May 1, 1915.....                          | 68     | 65.3        |
| Per cent done May 1, 9-year average.....                | 50     | 54.8        |
| Hay:                                                    |        |             |
| Tons of old crop on hand, May 1, 1915.....              | 87,000 | 8,470,000   |
| Tons of old crop on hand May 1, 1914.....               | 50,000 | 7,832,000   |
| <b>Prices to Producers</b>                              |        |             |
| Wheat, per bushel, May 1, 1915, Dollars.....            | 1.46   | 1.40        |
| per bushel, May 1, 1914, Cents.....                     | 80     | 83.9        |
| Corn, per bushel, May 1, 1915, Cents.....               | 68     | 77.7        |
| per bushel, May 1, 1914, Cents.....                     | 56     | 72.1        |
| Oats, per bushel, May 1, 1915, Cents.....               | 47     | 53.4        |
| per bushel, May 1, 1915, Cents.....                     | 30     | 39.5        |
| Potatoes, per bushel, May 1, 1915, Cents.....           | 39     | 50.5        |
| per bushel, May 1, 1914, Cents.....                     | 60     | 71.4        |
| Hay, per ton, May 1, 1915, Dollars.....                 | 5.60   | 11.80       |
| per ton, May 1, 1914, Dollars.....                      | 6.50   | 12.32       |
| Eggs, per dozen, May 1, 1915, Cents.....                | 15     | 17.1        |
| per dozen, May 1, 1914, Cents.....                      | 14     | 16.8        |

Printed and distributed by the Weather Bureau.

Stiffening cleats should be placed across the open side of mold to keep the side forms from bulging when the concrete is placed in the mold.

Do not remove the form from the green post until it has thoroly hardened, which generally requires 2 or 3 days. Allow the post to cure or harden for one week before erecting.

During the first two days keep the post wet and cover with canvas, burlap, straw, or other clean material, and dampen it thoroly each day for about a week.

The form should be oiled or soaped before the concrete is placed.

tained on the three-eighths inch screen gravel. All measurements should be made with the material poured loosely into the measuring box and the box, when full, should be completely leveled. If, for any reason, the concrete stands thirty minutes before using, it should be thrown away, for cement, once it has partially set, makes weak concrete, even tho it is rettempered by turning or adding water.

After depositing one and one-half inches of concrete in the form, carefully spade it and then place the reinforcing rods one and one-half inches from the side forms. Continue filling



the form, spading thoroly, meanwhile, until within one and one-half inches of the top, then place the last two reinforcing rods one and one-half inches from either side form. Then fill form completely and neatly trowel or smooth the concrete.

Too much emphasis cannot be placed on the spading of concrete because it is essential that the surface of the concrete be dense and free from voids. No air bubbles should be allowed to form. If considered desirable, convex molding can be placed along the square corners of the mold, thus giving a rounded corner which will not fray the clothes line.

### EXPERIMENTS OF PRACTICAL VALUE?

Binford, N. D.

The North Dakota Farmer:

We prize the North Dakota Farmer because it is a well edited paper dealing especially with local conditions.

It would be more helpful I believe, if it took more into account the fact that the beginner and the tenant are pretty short of funds, all the farm papers speak as if the farmer were better supplied with cash and credit than those who most need help are. Also the reports of experiment station work are not reports of farmers under ordinary conditions. The plats are too small and the experimenter does not seem to be hampered by lack of help, too few horses, too few buildings, second-hand machinery, only a start in cattle, a mortgage on the land, perhaps one on stock and machinery, lack of fencing, a family of small children, etc.

Some farmers have all these handicaps. If the experimenters could only have them and then succeed and the

full story be observed and told, then the reports would be of great value. They are of much value, but with ordinary conditions and handicaps, their success would be worth more and their example more tempting and safe to follow.

Very truly,

W. E. COLVIN.

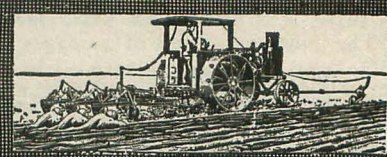
### A Reply by President Worst

I have read Mr. Colvin's letter, and there isn't very much to say in reply to him. The experimenter aims merely to set forth certain facts resulting from experiments, but with the expectation that the farmer will apply them according to his local conditions. Because an experimenter under certain conditions, even on a small plat, obtains a 40-bushel yield of wheat, it is not expected that the farmer can do as well in a larger field. He can, however, by following out some of the methods of tillage, fertilization, selection of seed, and thickness of sowing, approximate this yield,—at least do better than if he were to go about the work in a haphazard way.

Furthermore, as to the fact that the farmer is hard up and in debt, has a family to support and all that, the instructions given by the experimenter if observed, will go a long way toward meeting the farmer's conditions,—in this, that it will enable him to follow out certain methods that will make his labor more productive than otherwise. In other words the man that reads a good farm journal like the North Dakota Farmer and also the bulletins that are being published by the Experiment Station, and follows instructions and suggestions as closely as possible, will not only take some interest in his work, but will succeed far better for the reason that he will

apply approved methods in all his undertakings.

I have the profoundest sympathy for a man that is handicapped as many farmers are, for I have passed thru the mill myself. However, by giving heed to the advice of experimenters and the observations of men of experience, the farmer can certainly secure larger profits and enjoy his work much better than otherwise.



**Few Farmers Realize How Much More Power They Need**

There are only a few days when the conditions are just right to plow. With a Tractor you can do all your plowing at just the right time. A Tractor also gives you more power for plowing deeper, for doing more disk and harrowing, for harvesting your grain quick. Other men who own Avery Tractors have proved that Tractor Power means bigger crops, less expense and less hard work.

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5 Sizes—Fit Any Farm

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**The Largest Foundry Machine Shop and Boiler Shop in the Northwest. A large stock of Structural Steel and Iron always on hand. Full Line of Blacksmith Tools for Farm use. The Biggest plant in the Biggest Little City in the world.**

**We make a specialty of modern Fire Escapes. Best Tools and Skilled Workmen is the secret of our success. While in our city call and see us and judge for Yourselves.**

**Oxy-Acetylene Welding in connection.**

**End of North Bridge, N. P. Ave.**



### A PLEA FOR WOMAN'S INTERESTS

The North Dakota Farmer,

Please find enclosed fifty cents; to renew my subscription to the North Dakota Farmer.

As requested, I am sending the names of some responsible farmers and friends that I think would enjoy, and profit by reading, the North Dakota Farmer.

niture, etc., is sure to count. I have noticed too, that after a convention, such as the Tri-State, you have seldom printed a woman's lecture or one given to women. Perhaps they are not available and it may be you have and this is my error. I do not wish to make anything but what might be called a "constructive criticism" and hope I have made myself understood.

Very truly,

LEONA M. JAQUA.

### NORTH DAKOTA CROPS FOR 1914

An average of \$268 for every man, woman and child in the state.

The following table of acreages, products and price is pretty interesting reading and furnishes the farmers of the state plenty of ammunition for bombarding the folks "back home" in the land of the jobless man. May it mean an unconditional surrender to the attractions of the fair state.

To the Governments report of \$144,000,000 has been added the hay crop, which is no mean factor in determining the soil products.

| Crop           | Acreage U. S. Estimate |              | Bushels Harvested  | Price Dec. 1, 1914 |      | Value         |
|----------------|------------------------|--------------|--------------------|--------------------|------|---------------|
|                | Yield per Acre         | Dec. 1, 1914 |                    | Dec. 1, 1914       | 1914 |               |
| Wheat.....     | 7,457,863              | 11.2         | 83,528,065         | \$1.01             |      | \$84,363,345  |
| Oats.....      | 2,105,245              | 28.          | 58,946,860         | .37                |      | 21,810,238    |
| Flax.....      | 704,182                | 8.3          | 5,844,710          | 1.28               |      | 7,481,228     |
| Barley.....    | 1,938,351              | 19.5         | 37,797,844         | .45                |      | 17,009,029    |
| Rye.....       | 121,116                | 17.1         | 2,071,083          | .84                |      | 1,739,709     |
| Corn.....      | 606,430                | 28.          | 16,980,040         | .58                |      | 9,848,423     |
| Speltz.....    | 79,106                 | 25 (est)     | 1,977,650          | .50 (est)          |      | 988,825       |
| Speltz.....    | 79,106                 | 25 (est)     | 1,977,650          | .50 (est)          |      | 988,825       |
| Potatoes.....  | 105,846                | 109.         | 11,537,214         | .42                |      | 4,845,629     |
| Hay (Tame)...  | 225,179                | 1½           |                    |                    |      |               |
|                | Tons per A.            |              | 337,768 tons       |                    |      |               |
| Hay (Wild).... |                        |              | 1,500,000 tons cut |                    |      |               |
|                |                        |              | 1,837,768          | \$7.00 per ton     |      | 12,864,376    |
| Total.....     |                        |              |                    |                    |      | \$160,950,902 |

I am glad you are watching your advertising closely; the articles to Miss Leader have done and will do untold good and I thoroly believe in your paper.

Please do not let the woman's part of your magazine be neglected. If you could arrange for another series of articles or one now and then on domestic science by some good teacher or experienced home worker, it would please the women immensely. An informal talk such as good teachers often give a class of girls or women on laundry work, spring cleaning, fur-

You show your interest in a very substantial way. Thank you. Such friendly criticism is in the same line—exceedingly helpful. It certainly is far from the policy of this paper to neglect woman's needs. We shall from time to time furnish just such hints as you suggest. (Pub.)

### THE FARM BOY'S CREED

I believe that the country which God made is more beautiful than the city which man made; that life out

of doors and in touch with the earth is the natural life of man. I believe that work with nature is more inspiring than work with the most intricate machinery. I believe that the dignity of labor depends not on what you do but how you do it; that opportunity comes to a boy on the farm as often as to the boy in the city; that life is larger and freer and happier on the farm than in the town; that my success depends not upon my location, but upon myself; not upon my dreams, but upon what I actually do; not upon luck, but upon pluck. I believe in working when you work, and in playing when you play, and in giving

**Big Money in Running Water**

Let us start you in a business that will make you from \$15 to \$50 a day when farm work is slack. Other men have done it for years with an

**One Man One Team**

**Improved Powers Combined Well Boring and Drilling Machine**

Same rig bores through any soil at rate of 100 ft. in 10 hours, and drills through rock. One team hauls and operates machine. Engine power if wanted. Easy to operate—no experts needed. Small investment; easy terms. Make machine pay for itself in a few weeks work. There is a big demand for wells to water stock and for irrigation. Write for free illustrated circulars showing different styles. Lisle Manufacturing Co. Box 940 Clarinda, Iowa

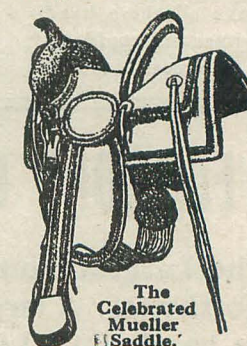
**READ THIS**

There must be a reason why there is such a demand for Justin's Boots. ¶ If you are going to wear boots, why not wear the best? Yours for the Best Cowboy Boots Made. ¶ Send us your address on a postal card and we will send you our catalogue, and self-measuring system.

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Mfrs. of Justin's Celebrated Cowboy Boots. NOCONA, TEXAS

### A\$45 Saddle, \$36 Cash



Our latest Swell Fork Saddle, 14-inch swell front, 28-in. wool-lined skirt, 3-in. stirrup leather, ¾ rig, made of best oak leather, guaranteed beef hide covered solid steel fork.

### THE FRED MUELLER

Saddle & Harness Co., Dept. R, 1413-15-17-19 Larimer St. Denver, Colo. Send in your name for our catalogue now ready.

## DAKOTA WELDING & MFG. COMPANY

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Expert welders and machinists of ALUMINUM gear and crank cases; manifolds and housings; CAST-IRON and cracked sectional boilers; cracked or broken cylinders or water jackets; STEEL frames or any broken parts of automobiles or other machinery. We weld cracked steam boilers with our large portable plant at your home.

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Phone 926

FARGO, NORTH DAKOTA



and demanding a square deal in every act of life. —Edwin Osgood Grover.

### THE COST OF WEEDS

#### Several Hundred Millions the Tax for Letting them Spread Seed and Roots—Preventative Measures.

The following discussion of weeds is taken from Farmers' Bulletin No. 660, "Weeds: How to Control Them," which discusses in detail methods of controlling annual, biennial, and perennial weeds thru cultivation and rotation and by keeping weed seeds from reaching the farm in crop seeds, in stock feeds, in manure, and in hay and straw. The bulletin also devotes a chapter to the introduction of weed seeds by the wind, and as seeds sometimes blow a mile or more in a strong wind, prevention of trouble from this source depends largely on co-operative weed fighting in a neighborhood.

The importance of keeping weeds in subjection can not be emphasized too strongly. It is difficult to estimate the damage they do, but it is probable that they cost the American farmer several hundred million dollars every year. In a sense, farming might be called a warfare against weeds. Some farmers emerge from the struggle victorious, while others go down to defeat. So powerful are weed enemies in reducing crop yields, while at the same time multiplying labor, that the farmer should at every turn strengthen his position against them. Bear these invaders in mind in planning the crops and in deciding on the fields to grow these crops, in choosing the implements, in buying seed, and in many other farm activities. Lack of careful planning with reference to weeds is apparent in nearly every community.

It has been shown in experiments with corn made by the United States Department of Agriculture that weed eradication is the principal, if not the only, beneficial result of cultivating this crop after planting. This means that in cultivating the corn crop the implements used should be designed primarily for accomplishing the destruction of weeds in the easiest and cheapest way. It seems to indicate, further, that as weed control becomes more thoro, intercultural tillage of growing crops may be accordingly decreased.

#### Weeds and Organic Matter

While there are various definitions, a weed may be said to be a wild plant that has a habit of intruding where it is not wanted. Some weeds produce immense quantities of seeds. Some

mature seeds in a very short time. Some have seeds difficult to separate from crop seeds. Some have roots or root-stalks that live for a number of years. They persist because well equipped by nature to hold their own. Weeds, however, are not always useless. Sometimes they are the principal means by which organic matter is restored to the soil, and, generally speaking, a soil is productive in proportion to the quantity of organic matter it contains. Turning farm land out to rest merely means that weeds are permitted to grow on it for several years. Weeds are also useful at times in preventing soil erosion, especially during the winter months, and serve a useful purpose in collecting and holding the nitrates and other soluble salts during periods when crops are not being grown, thus preventing these valuable nutrients from being washed out of the soil. Ordinarily, however, all these benefits may be realized thru proper rotation, in which case it is a serious mistake to allow weeds to grow.

### C-R-E-A-M

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Hand-woven, soft, durable, comfortable. Good as the South American Panama but cooler, lighter, more dressy. Direct from maker to you, \$1.50 Postpaid. State size and send money order. Money refunded if you are not perfectly satisfied. Very stylish for ladies this year.

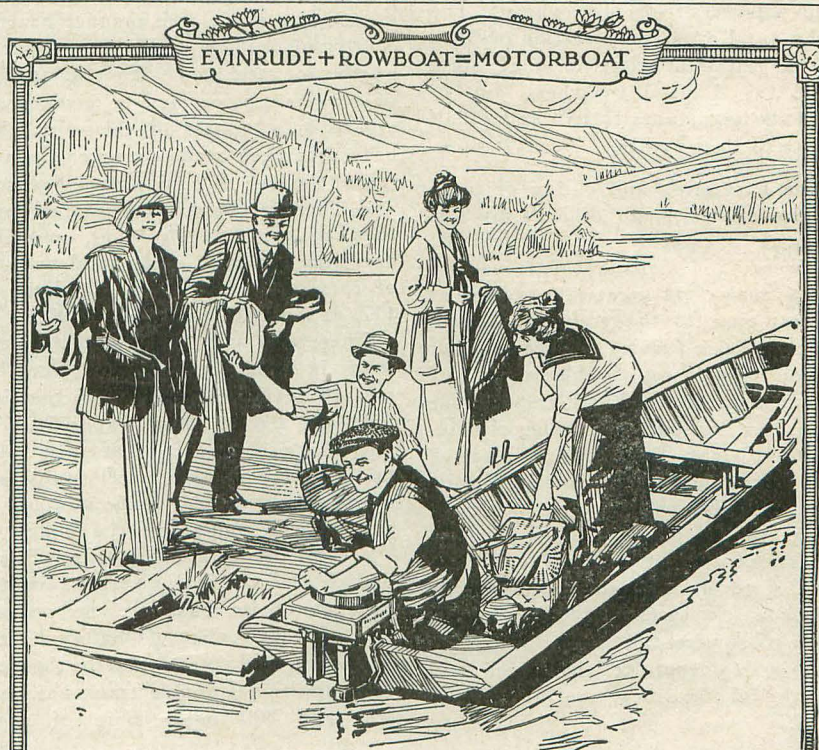
MARTIN LOPEZ & CO.,  
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Send 30 cents for 15 North Dakota Birds in natural colors, and list of 60 others. Address

North Dakota Farmer, Lisbon, N. D.



### EVINRUDE DETACHABLE ROWBOAT AND CANOE MOTORS

provide the means of a wholesome, healthful sport. They are portable—detachable—can be adjusted to boats of any kind by anyone—may be operated by children—practical for the hunter or fisherman—are equipped with built-in magneto—Maxim Silencer—have weedless propeller—can be used in fresh or salt water.

#### THE EVINRUDE AUTOMATIC REVERSE

The Sensation of 1915

Write for Illustrated Catalogue

CROCKER BROTHERS  
Lisbon, - - North Dakota



### Damage Due to Weeds

The full reason why weeds reduce yields is not definitely known. It is well recognized that weeds deprive crops of moisture, plant food, and sunlight, and by these means cause decreased yields. Experiments have shown, however, that even where there is a supply of moisture and plant food sufficient for the needs of both the weeds and the crop, weeds still exert a detrimental effect. This may be due in part to the weed roots giving off substances which are poisonous to crops. The fact that weeds do harm in more ways than has been supposed is all the more reason why the farmer should make strenuous efforts to subdue these invaders. Land that should produce 60 bushels of corn may yield no more than 20 bushels if weeds are not kept down by adequate cultivation. Wheat containing wild-onion bulblets is sometimes docked as much as 50 per cent, and in some cases there is no sale at all for such wheat. The agricultural experiment station of Minnesota estimates that in that state alone the damage to wheat due to weed seeds amounts to two and a half million dollars yearly.

The harvesting and curing of crops are sometimes made difficult by the presence of weeds. Russian thistle, bindweed, and Canada thistle usually are a source of great annoyance at harvest time to the growers of small grains. Again, some weeds harbor fungous and insect troubles which attack near-by crops. Furthermore, some weeds are poisonous or otherwise injurious to man, livestock, or livestock products. Poison ivy, sumac, jimson weed, and the seeds of corn cockle are poisonous to man; wild onion and bitterweed spoil dairy products; cowbane, water parsnip, and loco weed are poisonous to stock; and the barbed seeds of squirrel-tail grass and porcupine grass penetrate the noses and mouths of livestock, causing painful sores.

It is possible for a farmer, especially if he follows a good rotation, to make his farm almost weed free. Many men, however, make a start to clear their farms of weeds, but quit too soon. Often the campaign is stopped when success is in sight; but the weeds soon recover. Clearing a farm of weeds, especially perennials, is no easy task; it requires more than average intelligence and perseverance. If, however, one outlines a plan of attack and faithfully sees this plan thru to a finish, he can practically rid his farm of weeds without a great amount of labor and expense.

### LANDSEEKERS' EXCURSIONS

Effective Monday May 3rd, and each succeeding Monday and Tuesday during May and June, the Northern Pacific Ry. will sell Landseekers Excursion tickets from St. Paul-Minneapolis to points in North Dakota at a rate of \$12 for the round trip on a party ticket of five or more. On the going trip, the party must travel together but separate coupons will be provided for the return trip. Tickets will be good for 10 days and stopover-privileges allowed.

This arrangement will greatly benefit those interested in emigrating to North Dakota as well as to land men in arranging special parties of land seekers.

### NEW NORTHERN PACIFIC RAILWAY EQUIPMENT

The Northern Pacific Railway Company, in keeping with its policy of maintaining and improving its equipment in an up-to-date manner has recently placed an order for a large number of steel cars. That no special part of its service may be given preference in a matter of this sort, this order has been made to cover the various classes of equipment—Pullman and Tourist sleeping cars, dining cars, baggage cars, day coaches, smoking cars and mail cars. The total number of cars of all classes thus ordered is 117, at a cost of about \$2,000,000.

These cars will be delivered to the road in time to care for the increased traffic expected in connection with the Pacific Coast expositions in San Francisco and San Diego in 1915, and together with the steel equipment which the Northern Pacific now has in service, will emphasize the policy of the company to make "Safety First" one of the cardinal principles in the conduct of its business. In connection with this policy of "Safety First," it may be well to add that in the year 1914 additional double track has been laid and 300 miles more of auto-

matic block signals have been installed. A considerable amount of reconstruction and improvement work has also been done this year particularly in the Puget Sound region.

A special piece of work just carried to completion is the new Point Defiance line at Tacoma, opened to traffic December 15, 1914. This work includes a low grade double track line from Tacoma to Tenino, Wash., and a tunnel under Point Defiance, Tacoma, 4,400 feet in length, all concreted. This new line is for fast and heavy traffic and will be used jointly by the Northern Pacific and Oregon-Washington Railroad & Navigation railways.

### TRIBUTE TO D. WARD KING

Marker to Honor Road Builder May be Erected at Maitland

A movement is on foot to erect at his home near Maitland, Mo., a marker or boulder, suitably inscribed, by way of tribute to D. Ward King of road drag fame. It will cost about \$400, and the state board of agriculture will ask for an appropriation for that amount.

"Mr. King has taken out several patents on his road drag," said a member of the board, "but instead of trying to make money out of them for himself, he has placed them at the disposal of the state. I think the state should give him recognition while he is still in the flesh."

## We Want Men

In every county in Minnesota, North and South Dakota to represent us. Our stock is grown for our Northwestern conditions and only hardy stock will be sent out. Every planter wants trees and plants that will live, and we have them. Write for information and terms. Outfit free.

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New Ulm, :: :: Minnesota.



NORTH  
DAKOTA  
GROWN

## SEED CORN

KILN DRIED,  
SELECTED  
AND TESTED

The past season has been one banner year in the production of high grade North Dakota Grown Seed Corn, stocks show almost perfect germination tests and you should take advantage of present low values by ordering at once.

**Alfalfa, Clover, Timothy** and grass seeds are reasonable in price this year, and our stock is of the very highest test and will prove their worth when harvest time comes. Your order should not be delayed if you want good seed. Send today for our 1915 catalog, free.

**Fargo Seed House** Dealers in strictly high-grade seeds.  
FARGO - - - - - NORTH DAKOTA



Whether the monument is erected will depend upon the joint appropriations committee.

### DRAG THE ROADS

"When the smiles of spring appear,  
Drag the roads;  
When the summer time is here,  
Drag the roads;  
When the corn is in the ear,  
In the winter cold and drear,  
Every season of the year,  
Drag the roads.

"When you've nothing else to do,  
Drag the roads;  
If but for an hour or two  
Drag the roads;  
It will keep them good as new;  
With a purpose firm and true  
Fall in line; it's up to you—  
Drag the roads."

—The Kansas Industrialist.

### A STUDY IN SHEEP

#### The American Merino

The statements previously made apply equally to the A, B, and C types of Merinos. In the A and B types the body is considered only so far as is necessary to secure the vigor and stamina needed to enable the sheep to produce a heavy fleece of fine wool. Some breeders are now giving more attention than formerly to strength of top line and heart girth. The A type is the extreme in the size and number of wrinkles as well as in the fineness of wool. On account of the wrinkles the A type is not considered desirable for commercial wool raisers.

Merinos of the B type are stronger in body than the A's, less heavily wrinkled, and grow wool that is longer but not so fine.

The C type, or Delaine Merino, is larger and less wrinkled than the other types. In rams two good-sized folds on the neck are desired, while the body is sometimes quite smooth. Length of wool is demanded in this type, together with as much of weight and fineness as can be combined with it. Some C type flocks have considerable mutton value and the lambs are fed to be marketed after their first shearing.

The breeders' associations for Merinos are American and Delaine Merino Record Association, S. M. Cleaver, secretary, Delaware, Ohio; Dickinson Merino Sheep Record Co., Mrs. Beulah McDowell Miller, secretary, R. F. D. No. 2, New Berlin, Ohio; National Delaine Merino Sheep Breeders' Association of Washington County, J. B. Johnson, secretary, 248 West Pike Street, Canonsburg, Pa.; Standard Delaine Merino Sheep Breeders' Association, R. M. Wood, secretary, Saline, Mich.; Michigan Merino Sheep Breeders' Association, E. N. Ball, secretary, Ann Arbor, Mich.; Vermont, New York, and Ohio Merino Sheep Breeders' Association, Wesley Bishop, secretary, R. F. D. No. 1, Delaware, Ohio.

#### Rambouillet

The Rambouillet is the largest and strongest bodied of fine-wool sheep. Many Rambouillet breeders give most attention to the fleece, tho size is usually more sought for than in the American Merinos. Some of the ewes have backs broad and fleshy enough to compare favorably with the best of the mutton sheep. The rams are likely to be high in the withers and low back of the shoulders. Their size, growthiness, and strong vitality are their strongest points from a mutton standpoint.

Rambouillet fleeces vary in fineness and length, but are usually quite dense. They carry less oil than the American Merinos, but afford ample protection from storms and low temperatures of any section.

In selecting fine-wool rams it is necessary to be correctly informed in regard to the actual age of the fleece and to know whether or not the wool was shorn close to the skin over all parts of the body at the previous shearing.

The breeders' associations for this breed are American Rambouillet Sheep Breeders' Association, Dwight Lincoln, secretary, Milford Center, Ohio; International Von Homeyer Rambouillet Club, E. N. Ball, secretary, Ann Arbor, Mich.

#### The Hampshire

The strong point of the Hampshire is the rapid rate of growth in the lambs when well fed. This quality is associated with unusual size, the breed being the largest of the middle wool class. Because of this feature the breed is favored by persons wishing to get lambs upon the market at an early age and who are prepared to furnish feed and care to insure this rapid growth. In appearance the Hampshire is large frames, rather tall, heavy boned, rugged, and somewhat coarse looking. There is considerable variation in the length and closeness of the fleeces, the opener ones running more to length, but a fairly close and rather coarse fleece is most common and does not shrink heavily in scouring.

The breeders' association for this breed is American Hampshire Sheep Association, C. A. Tyler, secretary, 310 East Chicago Street, Coldwater, Mich.

#### The Lincoln

The Lincoln is shorter and more compactly built than the Cotswold. The face and legs are white with occasionally a bluish tinge. The back is very strong, heavily and firmly fleshed. The wool is of great length, tho much coarser than that of the shorter woolled breeds. Instead of hanging in the ringlets of the Cotswold it is in larger, broader locks, with a characteristic curl at the outer end.

The breeders' association for this breed is National Lincoln Sheep Breeders' Association, Bert Smith, secretary, Charlotte, Mich.

#### Long Wool Breeds

The long wools, bred chiefly for mutton, are the largest breeds of sheep. All of them are large-framed, square-bodied sheep, with very broad backs. Their fleeces are open or loose as compared with the fine and middle wools, coarser, and very long.



## WAITING FOR YOU

**160 ACRE  
FARMS IN  
WESTERN  
CANADA  
FREE**

Yes, waiting for every farmer or farmer's son—an industrious American who is anxious to establish for himself a happy home and prosperity. Canada's hearty invitation this year is more attractive than ever. Wheat is higher but her farm land just as cheap and in the provinces of Manitoba, Saskatchewan and Alberta

**160 Acre Homesteads are Actually Free to Settlers and Other Land at From \$15 to \$20 per Acre**

The people of European countries as well as the American continent must be fed—thus an even greater demand for Canadian Wheat will keep up the price. Any farmer who can buy land at \$15.00 to \$30.00 per acre—get a dollar for wheat and raise 20 to 45 bushels to the acre is bound to make money—that's what you can expect in Western Canada. Wonderful yields also of Oats, Barley and Flax. Mixed Farming is fully as profitable an industry as grain raising. The excellent grasses full of nutrition, are the only food required either for beef or dairy purposes. Good schools, markets convenient, climate excellent. Military service is not compulsory in Canada but there is an unusual demand for farm labor to replace the many young men who have volunteered for service in the war. Write for literature and particulars as to reduced railway rates to Superintendent Immigration, Ottawa, Canada, or to

**W. E. BLACK, Grand Forks, N. D.**  
Clifford Block

Canadian Government Agent.



# North Dakota Farmer

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Lisbon, North Dakota

**PUBLISHED EVERY MONTH**

**W. G. CROCKER : : PUBLISHER**  
Lisbon, N. D.

**E. F. Ladd, Editor** FARGO, N. D.

**BUSINESS MANAGEMENT, LISBON, N. D.**

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**PROF. W. B. RICHARDS, Livestock.**

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Insect pests.**

Remittances should be made by Drafts, Post-  
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Address all business correspondence to the  
Lisbon office.

**Vol. 16 MAY, 1915 No. 11**

When combine meets combine, then  
comes the lawsuit.

Try a few sheep on the farm. Let  
them help clear the land of weeds.

Remember when you contemplate  
the seeding of flax that flax cannot  
stand wet feet.

Stay by the boys and girls in their  
contests. They are making North  
Dakota famous.

England's daily meat bill amounts  
to \$500,000 every day of the year.  
Her principal sources of supply are  
South America, Australia, and New  
Zealand.

The best possible advertisement for  
a state is fine, well-painted buildings,  
good roads and profitable crops. These  
may be had without a special appro-  
priation in the interests of real estate  
men and land speculators.

If half the time now devoted to dis-  
cussing the relative merits of free trade  
and high protection were given to dis-  
cussing the best breed of hogs for the  
farmer to keep, farmers would prosper  
immensely under either law.

Corn should be cultivated frequently  
to kill the weeds and conserve mois-  
ture. Where wild oats are plentiful it  
will pay to turn all hands to and pull  
up every plant of this pest that es-  
capes the cultivator or drag and grows  
up in the hill. This should be done  
about the time the wild oats begin to  
head out.

By practicing the dry-farming meth-  
od of soil tillage, there would be no

dark forebodings of possible drought.  
If the clouds fail to give down their  
moisture the subsoil, which contains  
the moisture conserved by means of  
dry-farming methods, simply gives it  
up. In either case the growing crop  
gets what it needs, and the farmer  
gets what he wants.

We acknowledge the receipt of  
many helpful suggestions from our  
readers, and we wish to express our  
gratitude for such kindly co-operation.  
The North Dakota Farmer is at your  
service. We are working in the in-  
terest of no political party or other or-  
ganization, but solely for the better-  
ment of the farmer. Be free to call  
upon us, we are here to serve.

The judicious use of the disc and  
harrow will conserve more moisture  
than all the irrigation ditches will pour  
upon the land. Irrigation at best is  
costly, and while it costs considerable  
to disc and drag and subsurface pack  
the soil for the purpose of conserving  
the moisture, yet the relative ad-  
vantage from the moisture standpoint,  
is in favor of the disc and drag.

The man who insures his crop  
against hail takes less chance of heavy  
loss should a hail storm occur on his  
land. The cost of insurance is some-  
thing of an item of expense, to be  
sure, but hail storms very often strike  
a farmer when he can hardly stand  
the loss; hence it is better to spend a  
small sum of money on insurance and  
be able to sleep sounder when the ele-  
ments are raging.

Birds are the farmers' best friends.  
Instead of purchasing a gun for the  
kid to practice the fine art of mark-  
smanship on birds, it would be better  
to purchase a good book for him to  
study the value of birds as destroyers  
of worms and injurious insects. Get  
the boys right on this question, and  
they will turn their guns on gophers,  
rats, or inanimate objects. Naturally  
boys want to do the right thing, and  
destroy birds only because they do not  
know the harm they are doing when  
they rob birds' nests or kill the moth-  
er birds. Without birds the earth  
would soon be overrun with destruc-  
tive worms and insects.

Farmers as a class get more free ad-  
vice than any other people. This ad-  
vice comes from so many sources that  
it would be impossible to enumerate  
them. And what is more, too, many  
farmers, instead of exercising their

own judgment, follow the advice of  
those who, by soft words, induce him  
to do the very thing he should not do.  
That is, to make it possible for the  
fellow that only uses his wits to enjoy  
better living and a larger bank roll  
than the farmer that follows his ad-  
vice. If farmers were to give more at-  
tention to their own business, market-  
ing as well as producing, and co-oper-  
ate more in buying, they would save a  
good wad of the filthy lucre every  
year.

The newspapers have been pretty  
well filled up since early spring with  
"boosting" articles almost assuring  
the farmers a bountiful crop this  
season. And this because, "all condi-  
tions are so favorable, for a bumper  
crop." Since these sentiments were  
iterated and reiterated before the frost  
was out of the ground, they may be  
taken as so much "wind." In fact  
newspaper observations amount to  
nothing compared with good con-  
scientious work with the seed bed,  
the selection and proper treatment of  
the best seed grain obtainable, and a  
proper rotation of crops with a view  
of studying the year's work more  
equitably, killing weeds, conserving  
fertility and moisture, and diversifying  
the financial income. These things  
count whether the newspaper "boost-  
er" hits the truth or not.

Sweet clover seems to have made  
many warm friends in the drier sec-  
tions of Iowa, Nebraska, South Dako-  
ta and some other states. From what  
was considered a wild and dangerous  
weed, it has come into large favor on  
account of its adaptability to such a  
range of climate, and because it  
flourishes upon the poorest of worn-  
out soils. Moreover, being a legume  
its influence on the soil as a nitrogen  
gatherer is equal to that of clover or  
alfalfa. In the semi-arid sections of  
the west where the common clovers  
cannot be grown, this legume seems  
to flourish, and since livestock soon  
learn to relish it, and its feeding value  
is about equal to that of alfalfa, so  
they say, its advent into general favor  
will prove a blessing to a large portion  
of the country.

## LAST MONTH'S PUZZLE

On account of a typographical error  
it was impossible to discover any ad-  
vertisement containing all the words  
"this most remarkable winter egg-lay-  
ing strain." Those who succeeded in  
finding all but that one may send in  
the list and we will enter subscription  
as promised. We regret the error.



## Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade  
ASK YOUR GROCER FOR THEM.



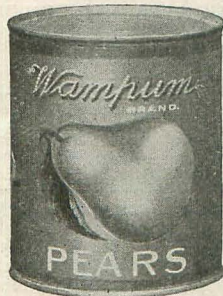
**"Gee——  
they're good!"**

A boy in school defined wholesome food as—"stuff you kin eat's long 's you kin hol' some."

### WAMPUM Canned Goods

are wholesome as well as delicious. Give growing children plenty to eat. WAMPUM brand won't hurt them. Sanitary, enamel-lined packages make contents SAFE. Highest EXTRA-standard quality; reasonable price.

A brand of  
Canned  
Goods from  
S.-O.-W  
Company  
is a big  
asset to a  
dealer.



**STONE-ORDEAN-  
WELLS COMPANY**

"Largest in the Northwest"

## Our Candies Are Pure

**Chaney-Everhart Co.**  
Fargo, N. Dak.

**"BUY"**

**"EAT"**

### HOME BRAND

Pure Food Products

**"ECONOMY" "SATISFACTION"**

**Griggs, Cooper & Co.**

MANUFACTURING  
WHOLESALE  
GROCERS,

**ST. PAUL, MINN.**

Main Offices:

**CORNER THIRD AND BROADWAY**



One package, 10 cents, makes <sup>one</sup> pint of wholesome Fruit Jelly. All flavors from true fruits.

### MONARCH BRAND



FOOD PRODUCTS

A GUARANTY OF PURITY. A WELCOME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO CHICAGO

## Eat North Dakota Sweet Corn

**Sanitary**

PACKED BY  
ONLY  
FACTORY OF  
ITS KIND IN  
THE STATE.  
SEALED IN  
SANITARY  
CANS AT  
OUR  
MODERN  
THREE-  
STORY  
FACTORY



**Delicious**

NORTH  
DAKOTA  
CORN  
EXCELS IN  
SWEETNESS.  
ASK YOUR  
GROCER  
FOR OUR  
BRAND.  
WRITE FOR  
PARTICU-  
LARS

**Sheyenne Valley Canning Co.**

**Lisbon, N. D.**



# Livestock Department

## FARM AND STOCK NOTES

N. J. Shepherd

A stunted colt seldom makes a well-developed horse.

The average colt does not require breaking, only training.

When butter is gathered in the churn in granular form, it is never overworked.

The right kind of care will add materially to the value of any horse.

Lime is a purifier and should be used often as a wash to crops, perches and nest boxes.

In nearly all cases the best animals are the offspring of mature parents on both sides.

The disposition of a horse depends to a great extent upon the manner in which he is trained.

A man who has not good control of his temper should not attempt to make horse-training a business.

The more rapidly an animal is fattened the less quantity of food is necessary to sustain its vitality.

On the farm at least a well-mated team means mated as regards strength and endurance rather than size and color.

The quality of the pork can be very much improved by careful and cleanly feeding and by the feeds used.

In nearly all cases good tools means putting in crops on time and taking better care of them after they are in.

It is the steady gaited horse that covers the greatest number of miles in a day and does it with the least injury to himself.

With fattening animals of all kinds, good feeding consists in giving the animals all they will eat without leaving anything or losing their appetites.

Progressive men always want to do better than they have done in the past, and the live farmer carries this into his farming and stock raising.

The hog will adapt himself to circumstances better than any other farm animal, but there is a line beyond which careless treatment cannot go without injury to the animal and loss to the farmer.

Generally, the quality of the milk depends primarily upon the cows producing it, and secondly upon the food and care bestowed upon the animals and the management of the milk after it has been produced.

If the roots of a tree are good and plentiful and the tree receives fair

treatment after being set out the stem and top will soon be all that can be desired. Even a crooked stem will often straighten up in time if the growth is right.

As a rule, any scheme which promises an unnatural and unreasonable profit or which holds out assurance of returns without labor is but a snare to catch the greedy. Prudence in dealing with people you know nothing about is a safe rule.

There is no better way of stimulating the appetite of any animal than by giving a variety and frequent changes of food and with no particular animal is this so apparent and beneficial as with fattening sheep.

No colt should be kept for a stock horse, be his form ever so perfect whose parents do not combine absolute soundness with good disposition; for any defect may hide itself for one generation and develop in all its intensity in the next.

It is only the amount of food given in excess of that necessary to maintain the animal heat and repair the waste of muscular tissue can possibly be a source of profit. Therefore the more we can induce the good cow to eat above this, within safe limits, the larger the margin of profit will be.

About ten days before farrowing the sow should be given her quarters, but if she has had the run of a pasture she should not be restricted too closely all at once. As the time of farrowing approaches the sow will incline to less exercise each day. The food given the last few days should be laxative and cooling, bulky and coarse rather than concentrated that the craving of the appetite may be satisfied without heating the system.

North Dakota Farmer:

I have a Guernsey heifer calf with a rupture at naval. Should anything be done for it?

Respectfully,

GEO. MICHEL

Your inquiry regarding rupture on Guernsey heifer calf, was handed to me for reply.

Unless the rupture is very bad, I do not think it would pay to attempt to do anything with it. The exact nature of the rupture, however, would determine this and the only way to get at it satisfactorily would be to get

## CLASSIFIED ADS.

### One Cent a Word

Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

## LIVE STOCK

### CALVES OF QUALITY

Holstien, Guernsey, Jersey or Shorthorn. Either bulls or heifers. Crated to express at \$12.50 to \$20 each. High grades. Get information and express rates. State your preference.

PAUL E. JOHNSON

Station F, - - - South St. Paul, Minn.

**FOR SALE:** Chester White Gilts Bred to Dakota's Pride, a son of Sweepstakes No. 28006, the hog that weighed 1260 pounds. Also Pigs at weaning time.

THE PRATT FARM

Geo. A. Pratt, Prop. : Cooperstown, N. D.

**Minnesota Highest A. R. Record Guernseys**

Twenty cows average 514 pounds fat, equal to over 615 pounds of butter

**World's Greatest Herd of A. R. Red Polls**

Whole Herd averages 422 pounds fat, equals to 506 pounds of butter

Bulls for Breeding Clubs to Suit All Pocketbooks

Jean Du Luth Farms, Inc., Duluth, Minn.

Geo. P. Grout, Managing Owner

**For Sale.** Registered Holstein Bull 11 months old, Three-fourths white. Of Pontiac Korndyke breeding. Also a few bull calves of same breeding. John Walsh, Northfield, Minn. R. 4.

**DURROC JERSEY GILTS AND WHITE HOLLAND TOMS**

Am offering only my choicest gilts bred to Crimmon Model 4th for March, April and May farrow. Pedigrees furnished. Roy W. Jacobs, Wadena, Minn.

**Red Polled.** If you are looking for choice bulls all ages, write, Howard H. Capener, Erie, N. D.

**FOR SALE:** Duroc-Jersey Boars including Herd Boar; Shropshire Ram Lambs; Barred Plymouth Rock, and Single and Rose Comb R. I. Red Cockerels, Dark Muscovy Ducks.

E. W. SMITH, : : BUFFALO, N. D.

**Pure bred Percheron Horses and Shorthorn Cattle Stock for sale.** Nels Knutson & Sons, R. 1, Fullerton, N. D.

**THE PLEASANT GROVE FARM** at Holmes, Grand Forks County, sells registered Shropshire and Oxford Rams and Ewes; also Polled Durham Bull Calves. R. E. Strutz, Bismarck, North Dakota.

**FOR SALE.** Two Holstein Bull Calves, nicely marked and fine animals; Ages three and four months. Sired by my herd Bull Sir Albino Beets Segis No. 116611. Wm. Pewe, McHenry, North Dakota., R. R. 1.

**HIGH GRADE GUERNSEY CALVES**

From our dairy herd, either sex, for sale. Prices ranging from \$10.00 up, according to age.

RIVERVIEW FARM

Stern Bros., Prop. Frank Lamb, Mgr.  
R. R. 2, Fargo, North Dakota

**Meadowlawn Farm.** The largest breeders in North Dakota. Percheron Horses, Shorthorn Cattle, and Berkshire Hogs. Where quality counts. Address: A. H. WHITE, Kramer, N. D.

**Choice Poland China Hogs** always on hand Bred Gilts all sold, Register now for spring pigs, either sex; prices right. Thos. Forbes, Petersburg, N. D.

### ENVILLA STOCK FARM

Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat Dogs and other breeds, Angora Cats. All varieties of chickens; turkeys, geese, ducks, guineas, pheasants, rabbits, ferrets. Pets. Live Foxes, Skunks, Mink and Badgers.

### Bixby's Red Polls

of A. R. Breeding

My herd bull J. D. Merryweather No. 24396 is from 1400-pound cows and is getting the size in my herd. His dam is a full sister to the World's Champion Two-Year-Old heifer. His first three dams average close to 400 pounds butterfat in one year.

J. S. BIXBY, : : LISBON, N. DAK.



a veterinarian to examine it and prescribe treatment.

Yours very truly,

W. H. PETERS,  
Animal Husbandman.

### DAIRY INSTRUCTION

New Salem has in a measure become the dairy center of North Dakota. A dairy school was held there the 21st to 23rd of December. This was held under the direction of Professor Shepperd of the North Dakota Agricultural College. He was assisted by representatives of the North Dakota Experiment Station, of the U. S. Department of Agriculture and of the State Dairy Department.

The main lines of instruction taken up were the feeding, care and breeding of the dairy cow and hog raising. Pork production is one of the things that seems to naturally go with dairying, so the members of the North Dakota Holstein Breeders Circuit have added pork production as a side line to their dairying.

The members of the North Dakota Holstein Breeders Circuit are taking the lead in dairying at New Salem. The members are all breeding pure breds as well as some grades though they are disposing of the grades gradually and will soon have nothing but the pure breds. The grades have been bred up so that it is in many cases hard to tell them from the pure bred. U. J. Downey is field man for the circuit. He visits each herd each month. He advises in regard to the feeding, care and the keeping of records. Each member weighs the milk from each cow at each milking so that at the end of the year the exact amount of milk given by each cow can be figured up. Mr. Downey tests the milk which gives the basis for figuring the amount of butter made by each cow. One two-year old heifer has already given over 12,000 pounds of milk and her year lacks a month of being up. This milk contained enough fat to make over 500 pounds of butter. The feed is also weighed so that the cost of it can be figured out at the end of the year. This gives the figures for determining

the profit or loss made by each cow. The cow that does not make a good profit is disposed of. In this way these farmers are improving their stock as they are breeding only from those that are making a profit. Many of the members of the circuit have found that they could make more by selling some of their cows as some made too little. In keeping the records the farmers have learned the values of the different feeds as they can tell from the amount of milk being given as to the use that the cow makes of what is fed.

One of the most striking facts brought out in the school was the fact that it was necessary to feed alfalfa in order to make the best kind of a ration for the cow that was giving a heavy flow of milk. Bran and oil meal could be used but not to the same good advantage. Then again the alfalfa has the advantage that it can be grown on the farm while the other feeds have to be bought and at good prices. Some of the members are feeding alfalfa and are finding

**DUROC JERSEYS** Gilts out of such sows as Golden Model Queen 6th, Model Beauty and other sows as well bred as could be bought at the sales last winter. Write H. N. HOYME, Jasper, Minn.

**HOLSTEIN** Cows, Heifers and Young Bulls. All ages. Write **Envilla Stock Farm, Cogswell, North Dakota.**

### MAPLE LODGE LARGE YORK-SHIRE

March and May pigs, \$10 up, also a few fall pigs, stock of good type and strong bone. Bourbon Red Turkeys, \$2.50, and up. Partridge Wyandottes, (winter layers) stock and eggs, \$1.50. **Edward Klebaum, Egeland, N. D.**

## Grade Up

**Buy a Thoroughbred Jersey Bull**

You can buy cows of high producing value or you may develop them. The bull is the most important factor in development. A thoroughbred Jersey bull pays big returns on his cost every year. Let us send you some Jersey facts.

**The American Jersey Cattle Club**  
324 West 23d Street, New York City



### ST. PAUL UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, MINN.

#### Comparison of Receipts and Shipments of Livestock for April, 1915

|                      | Receipts  |        |        |        |       |        | Total Cars |
|----------------------|-----------|--------|--------|--------|-------|--------|------------|
|                      | Railroads | Cattle | Calves | Hogs   | Sheep | Horses |            |
| C. R. I. & P....     | 714       | 274    | 473    | -----  | ----- | -----  | 40         |
| C. G. W.....         | 2505      | 874    | 5062   | 42     | 63    | -----  | 183        |
| C. M. & St. P.       | 7166      | 1560   | 20816  | 3368   | 243   | -----  | 619        |
| M. & St. L.....      | 4358      | 1362   | 14570  | 278    | 2     | -----  | 400        |
| C., St. P., M. & O.  | 5581      | 1268   | 13072  | 193    | 50    | -----  | 429        |
| C. B. & Q.....       | 145       | -----  | -----  | -----  | ----- | -----  | 6          |
| M. St. P. & S. S. M. | 3456      | 1508   | 19237  | 1034   | 39    | -----  | 397        |
| Gt. Nor.....         | 8627      | 3679   | 42169  | 1342   | 157   | -----  | 937        |
| Nor. Pac.....        | 4859      | 963    | 22167  | 4760   | 231   | -----  | 474        |
| St. P. B. & T.       | 34        | 1      | -----  | -----  | ----- | -----  | 1          |
| Driven In.....       | 1228      | 180    | 1692   | 8      | 51    | -----  | -----      |
| Total.....           | 38673     | 11669  | 139258 | 11025  | 836   | -----  | 3486       |
| Inc. over 1914       | 10375     | -----  | 33737  | -----  | 384   | -----  | 638        |
| Decrease.....        | -----     | 495    | -----  | 11761  | ----- | -----  | -----      |
| Jan. 1 to date.....  | 140819    | 36159  | 820355 | 169668 | 2333  | -----  | 16755      |
| Inc. over 1914       | 21391     | -----  | 329218 | -----  | 486   | -----  | 4091       |
| Decrease.....        | -----     | 1591   | -----  | 5605   | ----- | -----  | -----      |
| Average Wts..        | 790       | 202    | 210    | 80     | ----- | -----  | -----      |

|                      | Shipments |        |        |        |       |        | Total Cars |
|----------------------|-----------|--------|--------|--------|-------|--------|------------|
|                      | Railroads | Cattle | Calves | Hogs   | Sheep | Horses |            |
| C. R. I. & P....     | 845       | 21     | -----  | -----  | ----- | -----  | 31         |
| C. G. W.....         | 2025      | 115    | 1627   | 325    | ----- | -----  | 85         |
| C. M. & St. P.       | 9935      | 503    | 26876  | 4762   | 200   | -----  | 609        |
| M. & St. L.....      | 1050      | 54     | 304    | -----  | 4     | -----  | 33         |
| C., St. P., M. & O.  | 3999      | 319    | 2615   | -----  | 8     | -----  | 149        |
| C. B. & Q.....       | 977       | 5      | 12325  | 3211   | 424   | -----  | 177        |
| M. St. P. & S. S. M. | 3147      | 209    | -----  | 30     | 35    | -----  | 101        |
| Gt. Nor.....         | 3638      | 205    | -----  | 98     | 26    | -----  | 118        |
| Nor. Pac.....        | 1974      | 15     | -----  | -----  | 44    | -----  | 76         |
| St. P. B. & T.       | 29        | 5      | -----  | -----  | ----- | -----  | 2          |
| Driven Out....       | 478       | 172    | 1423   | 22     | 105   | -----  | -----      |
| Total.....           | 28097     | 1623   | 45170  | 8448   | 846   | -----  | 1381       |
| Inc. over 1914       | 9296      | -----  | 17168  | -----  | 305   | -----  | 300        |
| Decrease.....        | -----     | 2212   | -----  | 10726  | ----- | -----  | -----      |
| Jan. 1 to date.....  | 83644     | 4270   | 295244 | 147405 | 2446  | -----  | 5967       |
| Inc. over 1914       | 11353     | -----  | 158532 | 26457  | 577   | -----  | 1540       |
| Decrease.....        | -----     | 4430   | -----  | -----  | ----- | -----  | -----      |

## For Sale Choice Big Type Poland

**China Gilts**, Sired by Mouws Jumbo 3rd and Giant Rupert, bred to Dignan's Chief and Miller's Big Chief for March and April farrow. I am booking orders for spring pigs to be shipped at weaning time. Pedigree furnished. Call on or Write

J. A. Dignan

Waverly, : : : Minn.



**FOR SALE.** Short Horn Bull, 18 months old, Roan; weight about 1000 pounds. Good breeding. J. M. Crawford, Wahpeton, N. D., R. 3.

### MISCELLANEOUS

**WANTED.** Live Foxes, Skunks, Mink and Badgers, any time. Envilla Stock Farm, Cogswell, N. D.

**POTATOES** go 300 bushel to acre **CORN** 60 bushels to acre in HUBBARD COUNTY. Rich clover and dairying lands, near beautiful lakes, good towns, schools, roads, at very low prices. Write today to Miller Bros. Land Co., Park Rapids, Minn.

Grimm Alfalfa Seed from a field 20 years old. Price 50 cents per pound. Gustav T. Rasche, Westbrook, Minn.

**FOR SALE:** 224 Acres of Land, 2 miles from town, on the new F. & V. R. R. Good 5-room house, good barn, pasture, 2 good wells and a spring. Price \$48.00 per acre. R. O. Gauper, Claire City, S. D.

**FOR SALE:** Good Brick Creamery, with all machinery. Now running in one of the best sections in Roberts County, S. D. Price \$2800.00 with ice enough for the season. R. O. Gauper, Claire City, S. D.

**BINDER TWINE.** 7 1/4 cash, also note terms request delivered carlot quotations, Pliney E. Cooper, Sales manager, 307 Flour Exchange, Minneapolis, Minn.

**BARGAINS! BARGAINS!** Send for free magazine 1200 bargains. Farm lands, business chances, any kind, anywhere. Our services free to buyers. Western Sales Agency, Minneapolis, Minn.

**FOR SALE.** Medium Red Clover and Primost Flax.

J. M. Crawford, R. 3, Wahpeton, N. D.

**Agents Wanted** to sell our beautiful Art Pictures. They sell everywhere, in farm or city homes, at 25 cents up. Big profits. Beautiful sample, (size 16x20) and agent's terms, only 15 cents, post paid. Order at once and be the first in your territory. The Art Shop, Dept. A, Hendrum, Minn.

## Auctioneering

COL. H. A. KINNEY

Real Estate and Registered Stock Specialist—22 years experience. Write for dates and terms. Breeder and shipper of Chester White hogs. Larger blood lines for 1915. Milnor, - - - NORTH DAKOTA

**Wanted.** Responsible representative in each county. New Combination. 12 tools in 1. Sells at sight to farmers, teamsters, contractors, etc. Weight 24 pounds. Lifts 3 tons, hoists, stretches wire, pulls posts. Many other uses. Free sample to active agents. Easy work. Big profits. One agent's profit \$45.50 in one day. Another \$1000 in Dec. 1914. We start you. Write today for Big Color Plate. Quick action secures exclusive sale. Harrah Mfg. Co., Box M, Bloomfield, Ind.

**Young Man,** would you accept a tailor-made suit just for showing it to your friends? Then write **Banner Tailoring Co., Dept. 6, Chicago,** and get beautiful samples, styles and a wonderful offer.

**CASH.** If you want to sell your real estate or business or other property, any kind anywhere quickly for cash write us. We bring buyers and sellers together regardless of distance. Buyers located free. Established 1893. **Northwestern Business Agency, Minneapolis, Minn.**

**Alfalfa Seed—Milk River Grown—Genuine** Grimm pale blue blossom, 35c per pound (purity 99, Montana; 2nd grade 10c. Send 15c for sample package containing 2 oz. Montana, 2 oz. Grimm, 5 seeds Montana Yellow Blossom. James Rannel (Grower), Harlem, Montana, R. R. 5.

from experience that the alfalfa is very good. All will be growing alfalfa as soon as they can sow it.

In regard to watering it was brought out that if the cow has to drink too cold water in the winter that the milk flow is lessened. It was also brought out that the place in which the cows are watered should be protected from the wind else the cow will not drink as much as she needs for making a good flow of milk. The cow should be watered twice a day.

In the discussion on breeding it was brought out that in selecting stock it was necessary to pay a good deal of attention to the performance of the ancestors and to breed only from the individuals that are good producers. By studying the different sires it has been found that some are more capable of transmitting valuable qualities than others and these should be carefully watched for and kept for breeding purposes. In fact Prof. Shepperd in making the opening talk stated that this was one of the purposes, the finding of prepotent sires. He cited the fact that the American trotting horse was descended from the one horse Messenger. If this horse had

not been kept, the American trotting horse of today would not be in existence. In the same way a close watch may bring to light a sire that will be the starting point of a superior strain of Holsteins.

The following from the North Dakota Experiment Station assisted Professor Shepperd in the dairy school: W. H. Peters, Animal Husbandman; J. C. Hoke, Special Livestock Agent; W. C. Palmer, Editor; from the Department of Agriculture, W. Forbes, from the State Dairy Department, R. F. Flint, Commissioner and his assistants E. H. Pierce and E. A. Greenwood; and U. J. Downey, Field Agent of the Breeding Circuit.

Dairying is making New Salem one of the most prosperous communities in the state. The deposits in the banks at New Salem are several times as large as in other places of similar size and with similar territory surrounding. Nor do the banks have to borrow money from the outside as they get more deposits than the territory can use so that they have to send their money to other sections for investment. This is a record that can not be equaled in the grain farming sections.

### ST. PAUL UNION STOCKYARDS COMPANY, SOUTH ST. PAUL, Minn.

#### Comparison of the Origin and Disposition of Livestock for April, 1915.

| Origin of Livestock Received |        |        |        |       |        |            |
|------------------------------|--------|--------|--------|-------|--------|------------|
| States                       | Cattle | Calves | Hogs   | Sheep | Horses | Total Cars |
| Minnesota.....               | 33618  | 11381  | 96467  | 2990  | 310    | 2696       |
| Wisconsin.....               | .....  | .....  | .....  | ..... | 6      | 1          |
| Iowa.....                    | 16     | 9      | .....  | ..... | 29     | 3          |
| Far South.....               | .....  | .....  | .....  | ..... | .....  | .....      |
| So. Dakota.....              | 1273   | 51     | 9661   | 448   | 101    | 196        |
| No. Dakota....               | 3009   | 224    | 31773  | 1073  | 227    | 515        |
| Montana.....                 | 449    | 2      | 754    | 6514  | 144    | 60         |
| Far West.....                | .....  | .....  | .....  | ..... | .....  | .....      |
| Manitoba & N. W. T. 37       | .....  | .....  | 603    | ..... | .....  | 7          |
| Far East.....                | .....  | .....  | .....  | ..... | .....  | .....      |
| Returned.....                | 271    | 2      | .....  | ..... | 19     | 8          |
| Totals.....                  | 38673  | 11669  | 139258 | 11025 | 836    | 3486       |

| Disposition of Livestock  |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|
| So. St. Paul P'k'rs 13225 | 6607  | 96131 | 8128  | ..... | ..... | ..... |
| City & State Butch 487    | 66    | 985   | ..... | ..... | ..... | 29    |
| Outside Packers 1288      | ..... | 40251 | 270   | ..... | ..... | 416   |
| Minnesota.....            | 6615  | 613   | 440   | 475   | 184   | 237   |
| Wisconsin.....            | 3519  | 22    | ..... | ..... | 77    | 131   |
| Iowa.....                 | 2151  | 63    | 375   | ..... | ..... | 83    |
| Nebraska.....             | ..... | ..... | ..... | ..... | ..... | ..... |
| Kans. & Mo. . . . .       | 208   | ..... | ..... | ..... | ..... | 6     |
| So. Dakota.....           | 4533  | 232   | ..... | ..... | ..... | 121   |
| No. Dakota....            | 6180  | 353   | ..... | ..... | 23    | 173   |
| Mont. & West. . . . .     | 182   | ..... | ..... | ..... | ..... | 5     |
| Far South.....            | 38    | 28    | ..... | ..... | ..... | 2     |
| Manitoba & N. W. T. ....  | ..... | ..... | ..... | ..... | ..... | ..... |
| Mich. & E. Can. 438       | ..... | ..... | ..... | 4443  | 30    | 28    |
| Chicago.....              | 742   | 103   | 2054  | 3260  | 260   | 72    |
| Ills. (ex Chicago) 1429   | ..... | 2     | 82    | ..... | 179   | 65    |
| Eastern Points . . . . .  | 51    | 139   | ..... | ..... | 74    | 6     |
| Serum Plants. . . . .     | ..... | ..... | 983   | ..... | ..... | ..... |
| Returned.....             | 236   | 2     | ..... | ..... | 19    | 7     |
| Totals.....               | 28097 | 1623  | 45170 | 8448  | 846   | 1381  |



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## Poultry Department



### UTILITY POULTRY—WHAT DOES IT MEAN?

Michael K. Boyer

Utility poultry culture does not mean, as too many suppose, an endorsement of the common, mongrel, dunghill fowl. On the contrary, it calls for strictly purebred stock, and no other will successfully do the work.

Twenty-five years ago, when the broiler boom was on, only common stock was used, and as a result not one of the broiler raisers of that day is in business at the present time. The reason is plain: by using common eggs the broilers would hatch all sizes, shapes, and conditions of chicks, and when the time arrived to market it was found that in the pens were probably but a third that were fit in weight and condition to ship. The rest had to be held from one to four weeks longer. This entailed an extra cost that consumed the profits, and it was utterly impossible to send gilt-edged stock to market. About fifteen years ago a different class of broiler raisers developed in the same town, and they kept nothing but strictly pure stock (principally White Wyandottes). Instead of assorting the sizes and conditions, as was the case with the common stock, the present poultrymen are able to clean up a pen at a time, the chicks growing more evenly and quickly. Today broiler raising has become a profitable industry in many sections of the country, and all because the dunghill has been supplanted by the purebred fowl.

It is the same in raising roasting fowls for market, and it is the same in the egg business.

By the use of a single breed on an egg farm, the eggs are more uniform in size, color and shape, and naturally command a more ready market and at better prices.

What is meant by utility poultry is nothing more or less than pure breeds mated strictly for the increase of plump, meaty carcasses, good egg records, larger and better shaped eggs, and of a more uniform color. Together with the perfection of the output, utility poultry must have the best of constitution, must be strongly built—in short, must be a hardy business fowl.

It was not so many years ago that the birds coming from the yards of fanciers were anything but practical. To fit them for exhibition purposes

they were inbred and pampered until they were nothing more than "a down constitution." They were poor polished gentlemen with a broken-down constitution." They were poor layers, and furnished carcasses that the utility men of the present day would sort out and dispose of as "ordinary." It was this fact that led the poulterers to resort to crossing, and at one time that art was so extensively practiced that it threatened the business of the fancier.

Wise men are always willing to learn. The fanciers quickly caught onto the fact that a different policy must be pursued, and the result is that today we have breeds that are not only practical, but so superior to crosses (to say nothing of dunghills) that we seldom see any but the pure blooded fowl in the poulterer's yards. Even the farmer, the man who several years ago classed all poultry alike, is recognizing the fact that to have success he must keep stock in their purity.

But the practical poultryman does not alone rely upon the stock as he gets it from the breeder. He tests each breeding bird thoroly, and all that do not reach his ideal are discarded, no matter what their merits may be in regard to outside adornment. The trap-nest has been a God-send to him in this work. By it he has been able to pick out the good, bad and indifferent layers. He is able to mate up pens for future stock from the cream of his flock. He mates according to record.

Some years ago poultry were divided into four classes: the standard bred, purebred, half-breed, and common.

The standard-bred were for exhibition purposes only; the purebred and the half-breed for practical purposes; and the common or dunghill for such fogies as hold that "a chicken is a chicken."

The standard-bred was prized more as a hobby, and generally kept in the back yards of some enthusiasts. They had very little to recommend them save their beauty.

The purebred was a bird, as it is today, of the same blood as the exhibition fowl, but generally deficient in the so-called "points" necessary to make them winners in the show room. The average purebred on the practical farm, will have some disqualification that a poultry judge will notice, but if

### BEITH'S WHITE WYANDOTES

Winners at Crookston, St. Paul, Minneapolis and Fargo, N. D. Our birds are bred to lay as well as they are bred to win.

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Wheatland, - North Dakota

EGGS FOR HATCHING from choice Silver Lace Wyandottes. \$1.50 for 15 eggs. Mrs. Thomas Brady, Lansford, N. D.

### WHITE HOLLAND TURKEYS & BARRED PLYMOUTH ROCKS

Eggs for hatching from choice matings. Turkey eggs \$3.50 for nine eggs. Rock eggs, pen No. 1, \$2.50 for fifteen eggs. Pen No. 2, \$1.50. Express or parcel post prepaid. Not guaranteed by parcel post.

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BOURBONRED PURE BRED TURKEY TOMS, good ones, \$3.50 each. Toulouse Geese, \$4.00 per pair. Mrs. F. Spriggs, Maddock, N. D.

Breed White Wyandottes. Eggs for sale from vigorous trap-nested stock. My birds win in show room wherever exhibited. M. C. James, Valley City, N. D.

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White Holland Turkeys, Toulouse Geese and Barred Rock Cockerels. Gustav Larson : : Northwood, N. D.

S. & R. C. White Leghorns. Blue Ribbon and Silver Cup Winners. Cockerels, \$1.50; Eggs, \$1 per 15; \$4 per 100. H. H. Hirschy, Lisbon, N. D.

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White and Columbia Wyandottes, Light Brahmas, and S. C. White Leghorns. Over 30 years a breeder. Stock and eggs for sale. MICHAEL K. BOYER, Box 27, Hamonton, New Jersey.

PURE BRED S. C. W. Leghorns. Eggs for Hatching, \$1.00 per 15; \$4.00 per 100, or \$7.00 per 200. T. I. Martinson, Christine, N. Dak.

FOR SALE: Rose Comb Red Eggs for sale at \$1.00 per 15 eggs. Mrs. Heidlebaugh, Pleasant Lake, N. Dak.

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TOULOUSE GEESE EGGS: 6 for \$1.00. Mrs. Frank Stoner, Lansford, N. Dak

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POULTRY Ducks, Geese, Turkeys, Pigeons and Dogs. We are the most extensive producers of thoroughbred poultry in the world. Our fowls have won the leading prizes at America's largest Fairs and Expositions. Breeds are reared on separate farms. Send ten cents for Color Plate Poultry Book and price list. It tells how to make money with poultry; how to build poultry houses; how to hatch and rear chicks; how and what to feed for eggs. Every fowl shipped is selected by Expert Licensed Poultry Judges. UNITED POULTRY FARMS, BOX 31 HOPE, IND



it is bred in the proper manner it will not only be a better layer than the standard-bred, but will have a better carcass, and possess a constitution "as hard as iron."

The half-breed was the cross-bred, the result of a union of two different classes of purebreds. When the cross-bred was systematically made, it represented quick growth, plump carcasses, heavy egg yield from pullets, and a rugged constitution.

The common or dunghill or mongrel fowl is the result of careless work. Originally it descended from purebred stock, but afterwards was allowed to mix with the blood of other varieties until it deteriorated into mere nothing. Mongrels were often manufactured from crossbreds. In other words cross-bred females mated to cross-bred males, or even cross-bred males with purebred females, made the stock grow worse each year. That is the way the mongrel was created, and we most emphatically declare that no practical poultryman can afford to waste time or money on that kind. The utility breeder selects his stock from among his best workers, the fancier mates according to the requirements of the Standard, without regarding the fact that the hen has a good or a bad egg record. He matches for points, while the utility man matches for eggs. Supposing the fact that the male bird which heads his flock was hatched from an egg laid by a hen that laid but four or five dozen eggs during the entire year, and that the hens composing the flock to which this male is mated would not average over that number, per hen, what can be expected of the off-spring? Is it reasonable to suppose they will lay any more than their parents?

The utility man, on the other hand, will not use a female in his breeding pens that laid less than 100 eggs during the previous year as a pullet, and he chooses his males from flocks of the highest records. In this way each generation becomes more prolific.

But, the argument is often placed, will not the utility strains deteriorate, in markings and characteristics of the breed, if they are mated up alone for their practical qualities and no heed being taken if they are disqualified in every other way?

Let us explain. In that explanation we must refer to our methods:

We use trap nests in our pens. These nests we run from October 1st to the last of May only. The object is not so much the number of eggs a hen will lay in a year as it is the number she will lay during the coldest part of the year. We want good, winter layers. During this time we keep a strict account of each day's

production, and at the end of the term the total for each hen is made up. All pullets that have given us nine or more dozen eggs during that period of nine months, are retained for next year's breeders; all under nine dozen are at once disposed of. If we have more pullets that reach the mark of merit than we have room for, then we make a selection for best size, best shape and best color in eggs.

While we are making this test with our pullets we are doing the same with yearling hens. All hens that reach the mark are kept over another year, and, in fact continued in the flock so long as they prove their worth. Our plan is not to discard a hen on account of her age, but rather on account of her work.

The trap nest system has given us a means of selecting pullets that have inherited the laying qualities of their parents, and by mating these to males that have also come from meritorious stock we are gradually building up our laying strains. As we are doing this work gradually, we are not making these records at the sacrifice of hardiness and vigor, as ultimately is the case when a rich, stimulating diet is fed.

Now when selecting the males to head the flocks, we choose brothers. These birds are in no wise related to the females, and they are not only selected according to the records of their mothers, but also according to the nearness they come to the characteristics of the breed, or, as it might be said, to the requirements of the Standard. The result is that after ten years careful breeding we have flocks that are creditable representatives of the breed, and birds that are business in every sense of the work.

The first aim should be the utility qualities, and then breed as near the Standard requirements as possible without affecting the farmer. Use commonsense, remembering that poultry was created for food and not show.

#### POINTERS THAT MEAN SUCCESS

It is always best to breed from matured stock, especially on the female side. Nothing younger than yearlings should be used, where stamina is desired.

The great secret of success lies in the word "comfort." It begins with the chick and continues right thru its life.

In setting hens, as well as in quartering breeds, protection should be the order—shielding from storms and hot suns. More chicks are lost annually from exposure to driving rains, damp weather, hot burning suns, and close,

poorly ventilated coops at night, than from any other cause.

Aside from the varieties claimed as purely American, there are two breeds that, while they did not originate in this country, are so nearly American that we look upon them as a home product. They are the Light Brahmas and the White Leghorns, as they are bred today in the United States. It is but necessary to compare those breeds as produced by our English cousins, with the Yankee product, to show that they are so widely different, to almost be separate varieties. This is especially so in the case of the Light Brahmas.

Eggs shipped by express are very often considerably shaken up. Some years ago I. K. Felch & Son, of Natick, Massachusetts, placed a notice on each package of eggs, imploring the railroad employees not to play football with their shipments. Uncle Isaac said that while the notice was intended for a joke, it had a wonderful effect, for complaints after that were considerably less.

Eggs thus shaken up, if at once placed under the hen, are apt to bring forth poor results in the hatch. Immediately upon being received, the basket or box should be opened and the eggs laid on their sides to rest the yolk, in which position they should remain for about 24 hours.

That precocity and growth are antagonistic, there can be no doubt. The pullet that lays very early in life, either due to a natural disposition or by being forced with highly-stimulating food, becomes stunted in growth, and does not become the finely developed bird so desirable to either keep as a stock bird, or to sell as a table fowl.

This is a matter that should be carefully considered in feeding the young. It may be a wise move to force the pullets to early and hard laying, when it is not intended to breed from those birds the following season.

The beginner will have a hard road to travel if he lacks patience, perseverance, pluck, enterprise and capital.

Buff Orpington Stock. Eggs: 15 for \$1.50.  
Duroc Pigs, yearling Boar. G. H. Johnson,  
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## EGGS! EGGS!!

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**PURE BRED S. C. W. LEGHORNS**  
Cockerels, \$1.25 each; 6 or more \$1.00 a piece. T. I. MARTINSON  
Christine - North Dakota



## School and Home



Miss Ura Leader,  
Ruraldale, N. D.  
Dear Miss Leader:

One operation necessary on every farm is that of cultivating the soil. There is a variety of reasons for this work but it may be summed up in a single sentence: "We cultivate the soil in order to modify the soil structure."

To put the soil in a right, physical condition and to maintain this condition is the beginning and the end of cultivation. By soil structure we mean the arrangement of the particles. The soil is composed of small particles of minerals and a small amount of vegetable matter. These small particles may be massed together into small, hard lumps or they may be loosely grouped forming good soil tilth. Frequently, the particles are not cemented into masses when we have what is known as a loose, dusty condition.

It is not an easy matter to keep the soil in good condition. Very often the soil is too wet or too dry for one to obtain the desired results. The amount of water in the soil is very important. If the soil is too wet the grains are pressed closely together and results in a hard, lumpy condition.

You should remember that there is a marked difference in the different soil types. You recognize this when you speak of sandy, loamy and clayey soil. These differences are based upon the size of the soil particles.

Taking these loosely defined types, you can perform a large number of simple tests which will show what may be expected by different treatment. We consider that all tillage is to modify soil structure or to change the physical condition. Some of the results which may be reasonably expected if the proper condition of the soil is procured, are:

Conservation of soil water.

Getting the proper amount of air in the soil.

Development of the desirable bacteria.

Killing of weeds.

You can demonstrate many of these simple facts with inexpensive apparatus; take, for example, the movement of water. A large number of

experiments may be performed either in the class room or in the field. These experiments are described in many bulletins which are available.

I think such work is valuable for it clearly shows the children that all the work done in the field is for some definite purpose. There is a good reason for each operation. It takes the blind drudgery out of tillage since a boy can see just why he is doing the work. If he knows why he is doing a certain thing, no doubt, he can do it better. It gives purpose. It is something definite.

In my next letter I intend to go somewhat into detail in the purpose and methods of tillage. At this time I would urge that you get copies of the bulletins indicated. If you are not familiar with their sources I would be glad to write you concerning this.

With all the talk that is going on at the present time, I often wonder if you clearly understand the difference between conveniences, necessities and luxuries on the farm. Before closing this letter I want to take up briefly something concerning the conveniences on the farm. In the succeeding letter we are going to discuss the conveniences in the farm home.

The binder cannot be considered a convenience on a farm. It is an absolute necessity. It would be impossible to grow grain at this time and make it pay were it not for the harvesting machinery. The same can be said of the essential farm machinery. In speaking of the conveniences on a farm, we, therefore, do not mean those items which are absolutely essential in order to carry on the operations of production.

The kinds of implements indicated form one kind of working capital. Any item on the farm which pays for its use is working capital and cannot be considered a luxury.

Aside from these things there are many items which, while not absolutely essential, are very "convenient." To put these in good order and make them useful, it is necessary to do a good deal of preliminary planting. So few farmers have actual conveniences that it is not easy to discuss this phase of the subject.

So far as the farm itself is concerned, it appears to me that the conveniences consist largely of matters of arrangement. Matters of arrangement are made in order to save time. The

reason for this is that time is a big item everywhere. The saving of time is the all-important thing. Take, for instance, the simple fact: if a man lived to be a million years and was able to save one dollar a year, he would accumulate a great deal of money during his life time. While this is an exaggerated case, still it applies to all work on the farm as well as work in other places. Time is money; consequently, anything that will save time is important. Such things are more than conveniences, however, they have a marked economic value.

While some things of this kind, especially those around the home, do not save as much time, still they are well worth having for they make life more enjoyable and remove a great many of the drudgeries from every day work. In this respect we might discuss the subject of the water supply, the lighting, power-washing machines, churns, cream separators, feed grinders, and similar items.

However, I will leave these items until I write you again for I expect to take up at that time the conveniences in the farm home.

O. O. CHURCHILL.

### WHAT A MOTHER CAN DO

By Louise Scudday in Good House-keeping

Any mother can, in fifteen minutes a day, do much for the good looks and good health of her child, and prevent untold suffering, spiritual and physical, in mature life. It is sobering to think of the countless chagrins and mental morbidities and physical deformities now stalking around the earth, which the intelligent use of fifteen minutes a day would have spared the adults of this generation had doctors been able to tell mothers twenty years ago as much as they are able to tell them now.

It used to be the insane fashion of parents and public schools to insist that a child be right-handed. Even now the fashion prevails, and mothers often tell triumphantly the methods they used in forcing Willie to become right-handed. California has wisely passed a law that no child shall be compelled to use his right hand, if he persistently prefers to use his left. A left-handed child has its dominant intellectual centers on the right side of the brain instead of on the left as a right-handed child has; that is the reason he uses his left hand. And if you make him change to the right one, you oblige him to pass his nervous and mental impulses back and forth across his brain. The consequence is awkwardness, slowness, dullness, and incompetence.



### The Fragility of the Nose

The chief cause of nasal stoppage is external injury to the nose in infancy or early childhood. A child's nose can receive serious damage more easily and unapparently than any other part of his body. Even an ungentle sponge can break the little bones that support the arch of the nose and that are, in babyhood, of tissue-paper fragility. For this reason, no matter what shape it threatens to be, the nose should never be manipulated. I read once the triumphant narration of a young mother who had conferred upon her child aristocratic nostrils by clasp ing them in a clothespin as he slept! She had evidently got the idea from "Little Women," where it was put forward humorously. Any bending of the central bone of the nose is unmarked, save for a slight bruise on the outer flesh lasting a day or two; but the injury is permanent and produces much devastation. Nose stoppage means mouth breathing, projecting upper teeth, receding lower

jaw, adenoids, and tonsilitis. The importance of this slight initial injury cannot, then, be overestimated. Never let anything touch your child's nose if you can help it. If he falls heavily on his face, or if for other reason you fear that the nose is damaged, send at once for a physician. As he grows older, assure yourself constantly that his nose is in good working order.

### Mouth Breathing

The best way to keep the nose in good working order is by breathing exercises. These should be taken for three minutes, morning and night, at an open window by all children, especially if they do not have plenty of outdoor play. It is no exaggeration to say that the child brought up on breathing exercises and continuing them thruout life cannot have tuberculosis. The best substitute that can be found for vigorous outdoor play is to inhale a breath as slowly and as long as possible, and immediately exhale it in the same manner. It

should be inhaled and exhaled thru the nose, and if the child cannot take a deep breath in this way, and has not a temporary cold, he has nasal stoppage either thru eye strain or thru early injury. When nasal stoppage comes from eye strain, proper glasses will relieve the nose as well as the eyes. When it come from early injury—the bending of the middle bone of the nose—it can be cured only by operation. Nowadays this is the simplest of matters, quite painless and taking less than five minutes.

If you are one of those unfortunate mothers who have a sentimental and unreasoning dread of an operation, it is best for you to face the matter squarely. You may be sure that your child will one day bitterly accuse you for the physical and mental suffering and ugliness your sentimentality has fastened permanently upon him. That nasal stoppage may change the whole shape of the facial structure is well known. It is the way that breeders sometimes alter the head of a bulldog. Pushing in the nose stops it up, forces the puppy to breathe thru the mouth, and thus hinders the development of the upper part of its face. What happens by deliberate intention to a bulldog happens by accident to a child; his face undergoes the same structural changes as a result. And the act of the doting mother in allowing these structural changes to take place is just as selfish and just as cruel as the breeder's in deliberately causing them.

While few things have a more intimate bearing on physical, mental, and moral disaster than habitual mouth breathing, it is ruinous to make a child with nasal stoppage breathe with his mouth closed. Almost all the deaf people in the world owe their deafness to breathing thru a nose partially obstructed. It is never safe to **make** a child breathe thru his nose. If the nasal passages are free and open, he will generally do so instinctively. If they are not—and the breathing exercise above mentioned is the best way for any mother to find out for herself—he should be taken to a nose specialist for this trivial tho far-reaching operation. Upon having the nasal passages opened, the young child will at once breathe with closed mouth while sleeping. If he has been a mouth breather so long as to cause

## Official Denial

NO WAR TAX ON HOMESTEAD LAND IN CANADA

The report that a war tax is to be placed on Homestead lands in Western Canada having been given considerable circulation in the States, this is to advise all enquirers that no such tax has been placed, and there is no intention to place a war tax of any nature on such lands.

(Signed) W. D. SCOTT,  
Supt. of Immigration.  
Ottawa, Can., Mar. 15, 1915.

EVINRUDE+ROWBOAT=MOTORBOAT

## EVINRUDE ROWBOAT and CANOE MOTORS

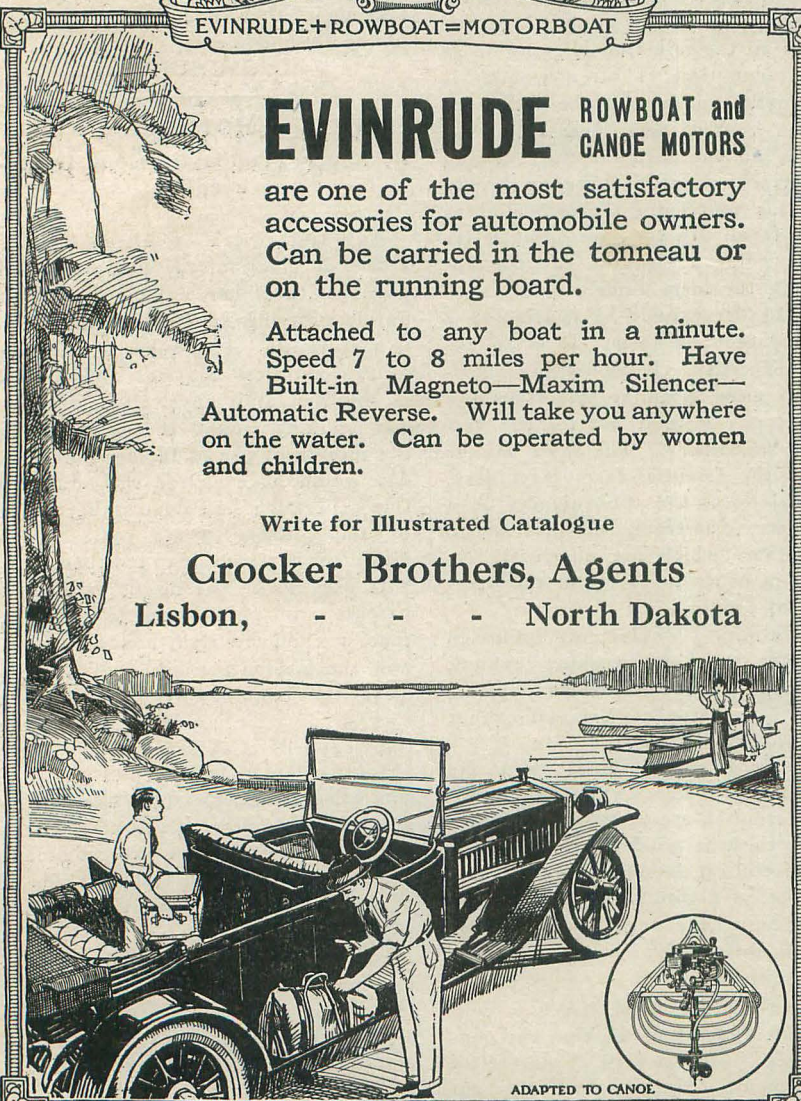
are one of the most satisfactory accessories for automobile owners. Can be carried in the tonneau or on the running board.

Attached to any boat in a minute. Speed 7 to 8 miles per hour. Have Built-in Magneto—Maxim Silencer—Automatic Reverse. Will take you anywhere on the water. Can be operated by women and children.

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his front teeth to protrude, then it is too much of an effort for him to close his lips, and he can be assisted only by the straightening of the teeth.

### Testing the Eyes

Once a month examine the eyes for granulation. Pull down the lower lid by applying a downward pressure of the finger tip an inch below the eye, and carefully turn out the upper lid over the tapering end of a penholder. If the inside membrane is not smooth, but has granules scattered over it like tiny grains of rice, the child has granulated lids. The exciting cause of this is external contagion, but an eye that is free from strain would successfully resist the contagion. Granulated eyelids always denote a need for proper glasses.

For this need the mother should always be on the lookout. The eyes of a child should be tested twice a year, and the mother can do it. She should get from any optician the card of test letters that he distributes as an advertisement. The child ought to see, at a distance of twenty feet, the line of letters labeled "Fifteen feet." If he cannot, take him to an oculist for glasses. Do not allow the child to learn to read or to go to school until an oculist has found out whether he needs glasses for near work. If you do this, you will never have a near-sighted child. If either eye turns in or out, or if both do, it is an infallible sign that the child needs glasses or better glasses. Nor is there anything else the matter with him. The right glasses will absolutely restore to their proper position a cross eye or a wall eye, unless the eye is blind. It is never necessary to cut the muscle for this purpose if the eye has vision; and cutting is always injurious, rarely efficacious, and sometimes results in blindness.

### SPECIAL CLUB WORK FOR BOYS AND GIRLS

Special club work has been provided for the boys and girls in six North Dakota counties. Local clubs are being formed in different parts of these counties. These will be visited each month by a leader representing the North Dakota Experiment Station and the U. S. Department of Agriculture.

The following county superintendents are co-operating in the work and providing transportation for the leaders: Miss M. Beatrice Johnstone, Grand Forks County; Miss Charlotte A. Jones, Pembina County; F. J. Steffek, McKenzie County; Miss Minnie J. Nielson, Barnes County; Miss Mary B. Flemington, Dickey

County and Miss Margaret Kennedy, Hettinger County.

Miss Helen J. Sullivan, formerly county superintendent of Cavalier County, now in the employ of the North Dakota Experiment Station Extension Department, will be the state leader in the first three counties and Miss Julia O. Newton of the North Dakota Experiment Station Extension Department will be the state leader in the last three counties.

The club work will consist largely of poultry raising, bread and butter making, sewing and canning vegetables. Thru these monthly meetings it will be possible to keep in touch with the boys and girls, to give them information and encouragement and to make the work more systematic.

In the south where this kind of club work was first started the results have been very satisfactory. It has led the club members to observe more closely, to recognize good and bad qualities in the product of their work that had before escaped their notice. They have learned to solve practical problems in plant and animal production and house work. They have learned the value of labor and how it brings results when well directed. The club work has taught the value of organized effort and has developed the social instinct and broadened the sympathies.

The club work has had a stimulating effect on the rural schools, in many cases re-directing their activities. The club work deals with actual everyday problems and makes them of fully as much importance as the more academic ones that too often are the only ones that receive attention in the school room. By creating an interest in the common everyday affairs it has lifted them from drudgery to the fascination of games, which in many cases makes the difference between wanting to stay on the farm and leaving it.

The clubs have not only quickened and developed the boys and girls but have had a big effect on the parents. For instance the results secured by the girls on a tenth acre plot in vegetables for canning has been a demonstration to the whole community of the possibilities in this line of work, if not for commercial purposes, then at least for furnishing the family with the canned goods that have too often been bought at the store. The boy who has secured a big yield of corn thru using good seed, good tillage and whatever else it took has made a demonstration that will effect the farming of the whole community. In North Dakota the boys have secured results in corn growing that are affecting the farming of the whole state,

It is hard to realize how far reaching the effects of the boys' and girls' club work will be.

### BIG CONTEST IN WARD COUNTY

Ward County has put up the biggest contest for boys that has yet been attempted by a county. Fifteen hundred dollars is being offered in prizes. W. A. Peck, county agricultural agent, who is sponsor for the contest, announced the following conditions:

The boy to enter must be 14 to 20 years of age. He must farm 17 acres for three years, 1915 to 1917 inclusive, with corn, wheat and oats in rotation on 15 acres and alfalfa on the other two. A record must be kept of all expenses, including labor of raising crop. An account must be kept of the income from the crops. The awards will be made on the basis of the largest net returns.

The boys will be required to follow instructions sent them by the county agent, and the boys will be assisted in disposing of their crops.

The prizes are as follows: 1st, \$250; 2nd, \$200; 3rd, \$150; 4th, \$100; 5th, \$75; 6th to 15th (10), \$50 each; 16th to 25th (9), \$25 each. A silver loving cup valued at \$100 will be awarded each year to the boy securing the largest net income from his 17 acres. At the end of the third year it

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becomes the permanent property of the one having the largest net income for the three years.

The name of the contest is Ward County Boys' Farming Contest. The object of the contest is to promote diversified farming thru practical demonstrations.

When boys all over the county begin to demonstrate the value of a rotation of crops thru carrying out the conditions of the contest there will be no excuse for the farmers, not working their farms on the rotation plan and thus secure the larger returns.

The contest will do more than demonstrate the value of rotations. It is

going to have a big influence on every boy who enters it, as he puts his best wits to work to make his acres yield the most, as he studies instructions, gathers up facts to incorporate into his work; tilling the soil will become a game, a fascination. They will learn the productive capacity of the soil and how to bring it forth and they will become attached to the soil. They will not want to leave the farm for the city. They will become the leaders in the farming of tomorrow. They will know the value of science in farming, of farm management, of marketing, of co-operation. This is the kind of work that the Better Farming movement has set in motion.

## Household Hints

By Aunt Maggie

A nice icing for cake is made out of pulverized sugar. Stir with cold water to a paste and put on the cake when cold.

When mixing flour for gravy, stir with a fork and see how much smoother it will become.

For pie dough mix with hot water a pinch of salt and baking powder. This will make it nice and flaky.

Turn your colander over anything that spatters while cooking. The food will not steam, as the steam escapes thru the holes in the colander and it will brown nicely.

Browned flour makes delicious brown gravy. Put flour in a pie pan and set on top of the stove or in a very hot oven. When it begins to brown it must be constantly stirred until brown all thru.

When baking custard pies, put one-third of a teaspoonful of baking powder in the custard. This makes it nice and firm.

To keep the contents of your cake-box moist, put two apples in it, replacing them with fresh ones as they become withered.

A good way to prevent cheese from molding is to wrap it in a cloth wrung out of vinegar and then in paper.

Lower the temperature of an oven considerably after a roast has been in twenty minutes and the juices will be retained.

### How to Remove Stains

Removing spots from coats and vests is best done with clear ammonia and water. Soap is apt to remain in the cloth, becoming a gathering spot for dust and future spots. The ammonia solution must be rather strong and put on with a brush rather than a cloth. Afterwards the cloth may be wet in clear water and well-rubbed, then pressed.

Stains such as come from fruit, oil or paint will yield to a home-cleansing fluid that all housekeepers would do well to have. It is made of a small glassful of rectified spirits of turpentine and a teaspoonful each of oil of lemon, oil of peppermint, oil of cloves, and oil of cinnamon. Shake well and rub vigorously over the stain using an old silk handkerchief or other bit of silk.

### House-cleaning Ways

When shaking rugs remember to grasp the sides if you wish to save the rugs.

Cheese-cloth bags filled with corn-meal will clean the window shades and wall-paper like new.

Tarnished brass rubbed with cut lemon and washed with soapy water, then polished with a soft cloth becomes bright and shiny.

Vinegar and tea leaves used together cleans glass vases discolored by flowers.

A bath of skimmed milk will brighten faded oil cloth.

Vases with long necks or water bottles can be cleaned with hot water and small bits of newspaper. Shake well and the paper will remove all stains from the inside.

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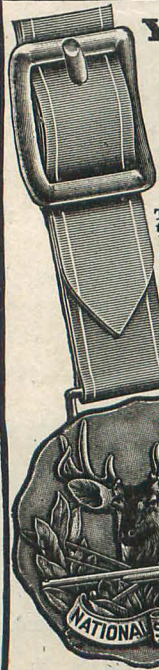
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## Seasonable Receipts

Edited by Mrs. Sadie Baird.

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#### Beans a la Original

Soak one pint navy beans over night. After parboiling and rinsing, put in kettle with one pound salt pork which has been cut into one-inch cubes. Add one quart water and three or four kernels of garlic and one medium sized onion which has been cut into eighths. Boil until beans are tender, then add one-half solid contents of a can of tomatoes and two bell peppers (either canned or fresh) boil all for ten minutes when it will be ready to serve.

#### Cream of Onion Soup au Gratin

Put two tablespoons of butter into a frying pan. Allow it to melt, but not brown. Cut up two medium-sized onions and fry until tender not allowing them to brown. Add one pint water and boil five minutes. Add one quart sweet milk and allow it to come to a boil and remove from stove at once. Have ready toasted crou-

tons. Put six in each soup plate and pour over the soup and sprinkle 1<sup>1</sup>/<sub>2</sub> teaspoonful grated cheese over each. Above is sufficient for six people.

#### German Potato Cakes

Pare and grate six large potatoes. Put the grated potato into a sieve or fine strainer and let it stand two or three minutes so the water can be separated from the potato. Add one teaspoonful salt, two yolks of eggs and one heaping tablespoon flour. Drop tablespoonfuls into hot lard and fry golden brown. The above is an old-fashioned German dish and will be found to be excellent.

#### Delicious Luncheon Sandwiches

Take one cup Nuefchatel or cottage cheese, one-fourth cup pimentoes (canned) salt and work into a paste. Spread one slice brown bread with above mixture and butter if desired. Put a lettuce leaf and slice of buttered white bread on top of brown bread and cheese. Sandwiches may be cut in fancy shapes and each one should be wrapped in paraffin paper.

#### Chile

The real Mexican chile is made as follows: Take one pound beefsteak; run thru the grinder two or three times. Put two tablespoonfuls lard in a frying pan and when it has melted add the meat and stir it until the meat is turned white or seared slightly. Do not allow it to brown. About two or three minutes will be sufficient. Fry medium-sized onion and add to meat with four kernels of garlic and two tablespoonfuls of chile powder. Pour over one quart boiling water and boil until there will be only about one cup of juice left.

#### Spanish Chicken

Disjoint and boil fowl until tender. Roll in flour and fry slightly. Have ready the following. Put one-half cup olive oil or butter (tho the former is preferable) in a frying pan and one medium-size onion which has been cut up for frying and two bell peppers. If the fresh ones are used they must be stewed until tender first. Fry slowly until onions are tender. Add one half-pint can of Spanish Hot which can be bought at any good grocery store. Allow sauce to boil one minute and pour over chicken which has been arranged on platter.

#### Pineapple Pie

Make crust for pie with equal proportions of lard and butter. Use

sliced pineapple and cut some in small pieces. Mix one cup sugar with one-half cup flour. Cover the bottom crust with one-half of the flour and sugar, then the pineapple and the rest of the flour and sugar on top. Cover with the pineapple juice and dot with pieces of butter, then put on top crust.

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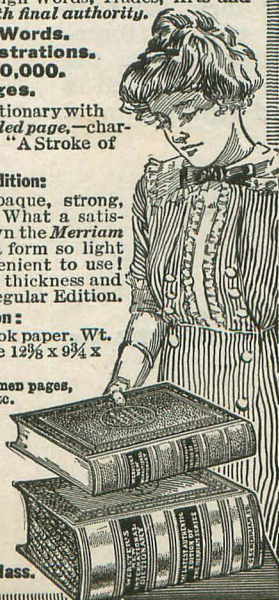
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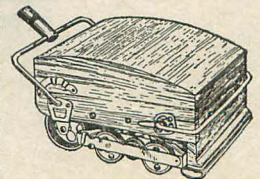


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